'Mylar' and Alcohol . . . . . Pg. 22

AIR CONDITIONING
HEATING & REFRIGERATION NEWS
The Newspaper of the Industry
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June 19, 1961

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'Hot Spell' Factor In Reports Of Improved Conditioner Sales

DETROIT, June 15—"Absolutely wild" was the term used by some dealers and contractors to describe the activity on air conditioning of all types and sizes during the hot weather which lasted several days of the past week, with temperatures soaring to 96°F in New York City and Chicago and other northern metropolitan centers.

Cool weather that was generally accompanied by violent wind and rain storms had ended the hot spell by Wednesday, June 14, in most parts of the East and Midwest. However, a warm spell was developing on the West Coast—which hasn't had much hot weather this year—with temperatures well over 100° recorded in some spots, and there was hope that this might portend the start of another hot spell for most of the nation.

How much did the warm weather boost sales? A regional manager for one of the major producers of air conditioning, looking over first reports for the business week ended June 9, found that shipments of central residential air conditioners for his Midwest area had more than doubled over the comparable

(Continued on Page 27, Col. 4)

✓ INSIDE THIS ISSUE

'SELLING CIRCUS' kicks off air conditioner drive that nets 87 sales and hundreds of leads... 5

REBUILDING SHOP—Misapplication or improper installation seen as greatest cause of unit failure. Skilled labor for repair is shop's major problem..... 8

THERMOELECTRIC NEWS — Products and predictions.....13

'SECTION-FREEZE' can eliminate need for second brain operation later by speeding up examination of tissue 14

'MYLAR' & ALCOHOL: a summing up—Tech Center interviews scientists and reviews evidence on timely topic.....22

PRINTING PRESS PROBLEMS solved by 30-ton chiller when bad well water condition forced abandonment of this source of cooling 24

SALES PRESENTATIONS (3) 26

EDITORIAL 16

OFF THE CHEST 16

WHAT'S NEW 20

VACATION SCHEDULE 25

Big Builder's Story Says They 'Chisel' On Cooling Systems

NEW YORK CITY — Those engaged in air conditioning who do business with builders will probably nod vigorously in assent with one major point made about air conditioning in the article "The Coming Bust in the Real Estate Boom" in the June issue of *Harper's* magazine, but will shake their heads in amazed dissent at another statement.

Author Daniel M. Friedenberg who has been a successful real estate operator, says that one place where the building speculator can "recoup" heavily is in air conditioning, because the difference between good and bad air conditioning can run as high as $3 per square foot, and with average office structures going about 300,000 sq ft, savings close to nearly $1 million can be realized. The air conditioning system, says the article, is the perfect place to cut costs because prospective tenants can't tell much about the quality of the system from the plans.

While many in the industry might tend to agree that much of this is true, they would probably hoot at a following parenthetical statement which charges that many sectors of the air conditioning industry are controlled by a few corporations who maintain prices by refusing to bid competitively! However, the author sees some "improvement" in this area, stating that he was recently "amazed" to discover that a bid for air conditioning "broke this rule."

Dallas-Ft. Worth Weekly Figures Show 5 Mo. Trend

Sales of central residential air conditioners in the Dallas-Ft. Worth area hit their peak in the first two weeks of May, on sales by weeks recorded for the first five months of the year.

Number of installations using unitary equipment in commercial applications in the same Texas area for the same period had shown a decline through most of May, in comparison with April figures, but rallied to show a peak performance for the year in both number of jobs and total tonnage, in the week ended June 3.

This resume of sales in the Dallas-Ft. Worth area was made possible through figures submitted by Texas Electric Service Co., Ft. Worth Div.; Dallas

(Continued on Page 27, Col. 3)

Frigidaire, Wiegand Join To Aid Builders

DAYTON—Frigidaire Div. of General Motors Corp. and Edwin L. Wiegand Co., Pittsburgh, have reached a working arrangement under which builders of all-electric homes can benefit from the combined experience of the nationwide sales and service organizations of both companies, it was announced here.

C. H. Menge, Frigidaire gen-

(Continued on Page 27, Col. 3)

Inside Dope

By GEORGE F. TAUBENECK

Learn to live and laugh — thus delay your epitaph

Embarrassing Prize

"As ye sow, so shall ye reap." Change sow to sell, and you have the story of Wayne G. Hyatt, sales manager for Reynolds Aluminum Co. of Canada, Ltd.

Mr. Hyatt, who sells aluminum to Fedders Corp., appeared on the ABC-TV "Camouflage" program recently; and to his delight came away the winner of two Fedders room air conditioners.

Mr. Hyatt almost had the FCC and the FBI interested when, in sudden joy, he blurted out that Fedders is one of his biggest accounts.

Please Don't Blame Frank

Estimable Frank Versagi, new editor of the NEWS, reports that he is being unfairly blamed for the fact that "Dope" hasn't published jokes recently.

Friends, please don't give Frank fits about this. "Dope" has been too concerned about world problems recently to be his corny old self. Herewith, we try to rectify this oversight.

Modern Mother Goose

Little Miss Muffet sat on
a tuffet
Eating her curds and whey;
Along came a spider, and
sat down beside her . . .
Miss Muffet stepped on it.

Peter, Peter, punkin eater,
Had a wife and couldn't
keep her.
Darned inflation.

Swarm of bees descended upon a Shell gasoline station.

(Continued on Page 6, Col. 1)

In the News This Week

Bill Easing Improvement Loans Passes Senate

WASHINGTON, D. C.—President Kennedy's housing bill, which provides, among other things, for increasing the limit on home improvement loans to $10,000 with up to 20 years to repay, was passed by the Senate last week by a vote of 64 to 25.

A House version of the bill has been passed by the House banking committee and is expected to be debated this week.

If the home improvement provisions should become law, they could possibly assist the sale of central residential air conditioning by reducing monthly payments through longer terms. Present limit for home improvement loans is $3,500 with five years to repay.

•

Freak Cooling-Heating Mishap Fells Six

JACKSON, Mich.—Six persons were felled by carbon monoxide fumes recently when air currents carried the gas from the basement through a two-story building.

Speculating on the reason for the unusual mishap, a fire department inspector said a combination of warm air outside the building and cool air inside might have caused furnace fumes to be swept back down a chimney. The furnace was fired when air conditioning lowered the temperature in the building to an uncomfortable level, it was reported.

Five persons were hospitalized after being overcome by the fumes. Another did not need treatment. All were recovering.

•

Michigan Governor Vetoes Milk Pricing Bill

LANSING, Mich.—Michigan's "on again, off again" milk marketing bill has finally been vetoed by Governor John Swainson.

The bill would have made it an unfair trade practice to give or lend refrigerated cases or cabinets and compressors or to sell these items, ice cream cabinets, or vending machines at less than invoice cost to retailers.

Supported by milk producers and dairy unions, milk pricing provisions of the bill met vociferous opposition. It was passed by the legislature in May, then recalled and returned to committee. It was passed again on adjournment day and sent to the governor, who vetoed it because, he said, it would deprive consumers of true savings by limiting competition. Stating that he still favors legislation to correct unfair trade practices in the dairy industry, Swainson said "this objective can be evaluated separately from the effort to regulate prices."

20 Air Conditioned Homes Sell at Fast Clip In Boston-Area Project

STONEHAM, Mass.—Twenty homes in the Eastview Subdivision sold at a fast pace, thanks in part to air conditioning.

D'Annolfo Associates, realtor and developer, reported selling 14 of the homes in the first eight days and the remaining six in an additional 13 days.

Salesmen for D'Annolfo indicate that the company's policy of offering central air conditioning as part of the home was a major factor in the fast sales. Nine different model homes were offered in the $17,250 to $19,150 price range.

D'Annolfo is now completing another subdivision of 45 homes in Beverly, Mass. — known as Centerfield. All of the planned homes will include central air conditioning. D'Annolfo said that 17 different models will be offered in the $15,250 to $20,400 price range. The models vary from ranches and split levels to Cape Cods.

Mueller Climatrol, division of Worthington Corp., said three truckloads of air conditioning equipment were on their way to Beverly.

Ray McCarthy of R & M Heating in Waltham, Mass., said, "We're using Mueller Climatrol remote condensing units exclusively."

Joe Elliott Takes A Hard Look

After a year in the air conditioning and refrigeration industry, heading up the York Div., Borg-Warner Corp., Joe Elliott has formed some viewpoints on the industry's ways of doing business and its future course. These are reported in an interview on pages 17-19.

Stacy Heads New Gaffers & Sattler South Central Div. Office In Dallas

LOS ANGELES — Gaffers & Sattler has continued its marketing expansion by establishing a new South-Central division with offices in Dallas, according to P. L. Chabre, vice president in charge of sales and marketing.

David Stacy

Gaffers & Sattler manufactures furnaces, air conditioners, air coolers, ranges and ovens, glass-lined water heaters, and built-in dishwashers.

The new South-Central Div. offices will be located at 154 Howell St. in Dallas' new Trinity Industrial Park. Complete warehouse facilities also will be located there, it was pointed out by Gaffers & Sattler.

According to Chabre, the new office has been established to render greater service to Gaffers & Sattler distributors in Texas, Louisiana, Mississippi, and Oklahoma.

David Stacy has been named regional manager for the South-Central Div. Stacy, who will head up a sales staff of seven, formerly represented Gaffers & Sattler in the Houston, Texas, marketing area.

A complete display of G&S products will be maintained at the new offices.

This is the second marketing expansion made by Gaffers & Sattler in recent months. Earlier this year a new branch sales office was opened in Chicago.

Utility Spokesman Sees Gas Window Unit 'Before Long'

DEAL, N. J. — A prediction that gas window air conditioners will be on the market "before long" was made recently by Dale B. Otto, president of New Jersey Natural Gas Co., in a talk here.

Reporting on recent executive gas industry conferences he attended, Otto said, in part:

"Gas air conditioning volume has doubled in the past two years, but this is only the beginning in this field. Before long there will be gas window air conditioners that will provide the break-through into the air conditioning market."

Natural gas, he said, supplies one-fourth of the nation's requirements and is the country's fifth largest industry.

American Assn. for Contamination Control Formed; Objectives Listed

DETROIT — A new national organization, the American Asciation for Contamination Control, has been organized here as a technical society devoted to contamination control in industry.

Announcement of the incorporation of AACC under the laws of Michigan was made by Eugene A. Sloane, editor of AIR ENGINEERING magazine and executive secretary of the new group.

James Mildon, president of the association and executive plant engineer for Lear, Inc. in Grand Rapids, Mich., declared that there is a great need for such an organization.

There is a need, he said, for standardizing contamination control design of white room facilities, dust counting, and dust monitoring.

The new association will concern itself with these problems.

Any person having a professional interest in the design, operation, supervision of or supply of equipment for contamination control may become a member of AACC, upon approval of two-thirds of the executive committee.

Annual individual membership dues are $10. Corporate sustaining memberships are $100.

Mildon said that AACC is planning to promote a full-fledged symposium on contamination control and an exhibition of equipment for contamination control either this fall or next spring.

The association's constitution calls for annual meetings sometime during March.

The constitution lists the following objectives for AACC:

1. Promote the science of contamination control for fabrication, cleaning, assembly, test, inspection, and use of contaminant-sensitive products.

2. Disseminate technical data on control of contaminants.

3. Establish sound engineering practices and cleanliness criteria to aid in providing more universally acceptable cleanliness standards.

4. To evaluate performance of products used in or in association with super clean areas.

5. To assist in establishing cleanliness measurement techniques for evaluation and monitoring of contaminants.

6. To assist in establishing techniques for super clean area operations.

7. Be a source of bibliographical information on the subject.

8. To further the development of techniques for the control of airborne contaminants.

In addition to Mildon and Sloane, first officers of the AACC are: Chris Gort, plant engineer, Sperry Phoenix Co., treasurer; Ed Casey, plant engineer, Rocketdyne Div., North American Aviation Corp., vice president; Irving Kodel, manufacturing development engineer, Sandia Corp., vice president; and Alvin Lieberman, research chemical engineer, Armour Research Foundation, Illinois Institute of Technology, vice president.

Applications for membership may be made to Sloane at 450 W. Fort St., Detroit 26, Mich.

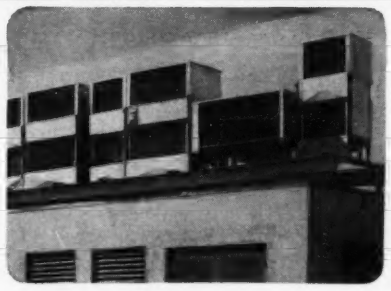
Bryant Names Berkel Asst. to President

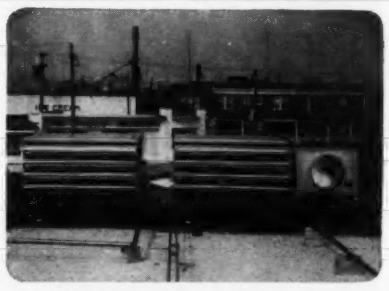
INDIANAPOLIS — The appointment of Howard J. Berkel as assistant to the president of Bryant Mfg. Co. has been announced by Samuel Shawhan, president.

Berkel will assume responsibility for quality control, central order and planning, and a number of similar staff duties. He will retain his position as director of personnel and public relations.

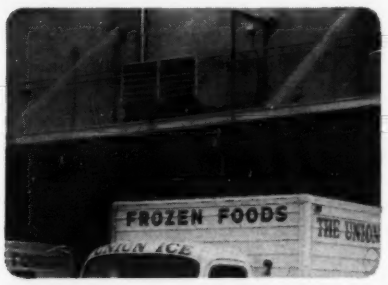
throw your compressor out!*

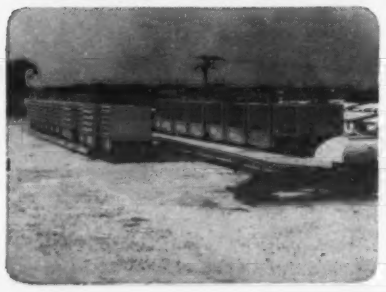
*outside that is!

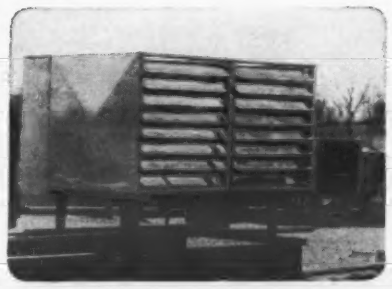


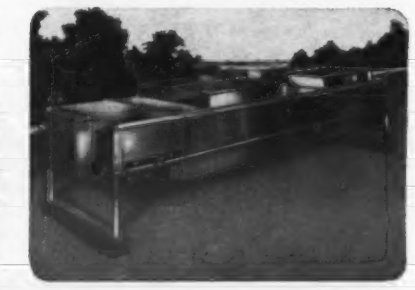


STOP wasting costly building space!









USE KRAMER

OUTDOOR CONDENSING UNITS

FOR AIR CONDITIONING—COMMERCIAL, INDUSTRIAL & SUPERMARKET REFRIGERATION

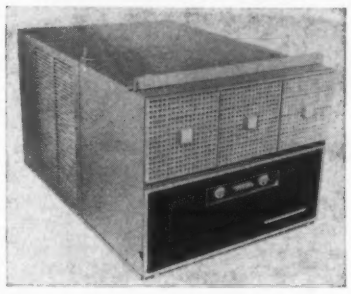
Kramer's Outdoor Condensing Units will operate outside without any additional protection or adjustment under all temperatures and weather conditions. They can be used for any application —air conditioning, commercial refrigeration, supermarket application, or industrial refrigeration.

Completely assembled, wired, tested and factory run-in, the units arrive on the job ready to operate. Simple hookup eliminates costly installation and control adjustment time. Kramer's Outdoor Condensing Units end waste of valuable indoor space.

WRITE FOR BULLETIN

KRAMER TRENTON CO., Trenton 5, N. J.

47 YEARS OF CONTINUOUS ACHIEVEMENT IN HEAT TRANSFER



Fedders Adds 4 Everest Model Window Units

MASPETH, N. Y. — Fedders Corp. has announced four new "Everest" window air conditioner models with cooling capacities of 24,000 and 28,000 Btu.

The 28C models remove 4.5 pints of moisture per hour and the 30C models take out 7.3 pints every hour, the company stated.

Fedders said the Everest models offer both good air distribution and quiet operation. Features include separately powered twin centrifugal blowers.

"The three-speed blower system and wide, unobstructed air passages permit fast cooling at a very low noise level," the company said. "All four models, operating on 208 and 230 volts, feature a built-in thermostat, exhaust, ventilation controls."

One Everest unit will cool the average one-floor open-plan contemporary home or, with wall-mounted air circulators, every room of a more enclosed floor plan, according to Fedders.

The Everest measures 27 in. wide, 37½ in. deep, and 21½ in. high.

More Than Half of '61 Cadillacs Are Cooled

DETROIT — Air conditioning installations by Cadillac have risen to a record 52.2% of production, according to General Manager Harold G. Warner, who added: "This is the first time we have surpassed 50%."

Warner said the rate has increased steadily since 1953, when air conditioning was first offered on Cadillacs and was used in 9.1% of production.

Since then, air conditioning has gone into 357,000 Cadillacs. In three models it has topped 80%.

Metals & Controls Promotes R. F. Roth

ATTLEBORO, Mass.—Robert F. Roth, on the merchandising staff since, 1956 was named merchandising manager of Metals & Controls Inc., it was announced by Burton O. Haun, Jr., division manager of marketing.

R. F. Roth

Metals & Controls is a corporate division of Texas Instruments, Inc. Roth replaces Robert A. Schultheiss, who was appointed to the Industrial Metals department as manager of marketing.

Holly-General Plans Expansion

PASADENA, Calif. — The Holly-General Div. of The Siegler Corp. has acquired additional property adjacent to its plant here and has initiated plans for adding 100,000 sq ft of factory space to its present facility.

According to R. K. Miller, Holly-General president, this is necessary to meet the increased demand for the division's products. Miller stated that sales of heating and air conditioning equipment are running 50% ahead of last year's sales and from all indications the trend will continue.

Approximately 100 employes were added April 1 and for the first time in Holly-General history three shifts are now being maintained, it was pointed out.

V. J. Heinis

E. F. Paquette

Heinis Heads Rheem Home Products Group

NEW YORK CITY — V. J. Heinis has been appointed president and E. F. Paquette executive vice president of Rheem Mfg. Co.'s Home Products Group, A. Lightfoot Walker, Rheem president, announced.

Heinis had been vice president and general manager, Home Products Group, and Paquette had been vice president and general manager of the Rheem Container Div., Linden, N. J.

Rheem Home Products Group headquarters are in Chicago. Products include central heating and air conditioning equipment.

Heinis and Paquette are being promoted to new positions in an expanded management organization for the Home Products Group.

●

CHICAGO—Duncan C. Menzies and Mark R. Sullivan were elected to the board of directors of Rheem Mfg. Co. at a meeting of the board here.

Menzies is president and director of Servel, Inc. Sullivan, former president of The Pacific Telephone & Telegraph Co., is a director also of Pacific Telephone, California Packing Co., Wells-Fargo American Trust Co., and New York Life Insurance Co.

News Editor To Speak At ASHRAE Symposium

DENVER — Frank J. Versagi, editor of AIR CONDITIONING, HEATING & REFRIGERATION NEWS, will speak at the Air Conditioning Symposium to be held on Monday, June 26, during the 68th annual meeting of the American Society of Heating, Refrigerating & Air Conditioning Engineers.

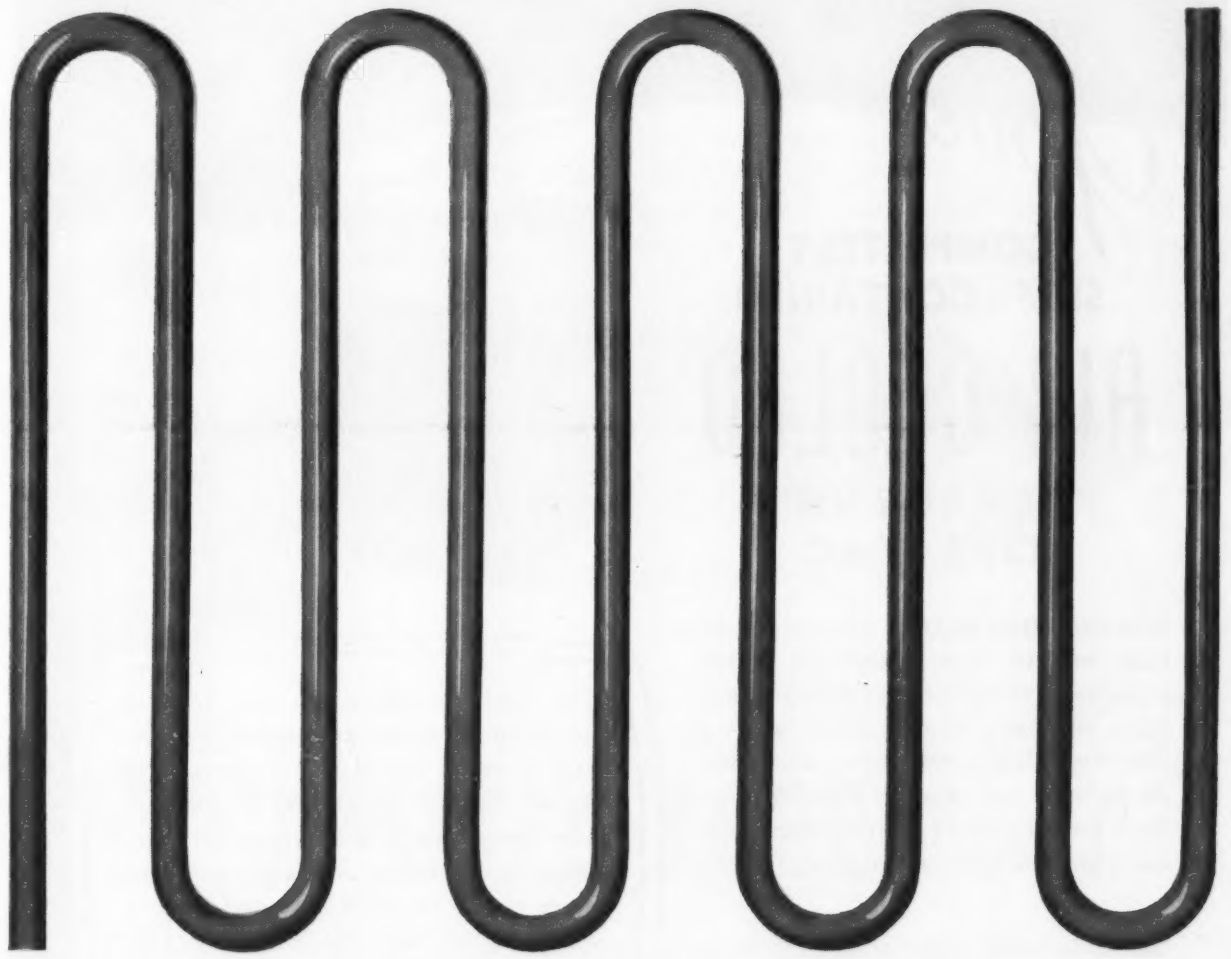
Versagi will discuss "The Role of Engineers In the Future of Air Conditioning: A Moral Responsibility."

For Your Reprint Copy

"Emergency Diagnosis, Repair of Hermetic Unit Electric Components," by John L. Zant, mail this ad with your name and address to: Air Conditioning, Heating & Refrigeration News, 450 W. Fort, Detroit 26, Mich.

Only 25¢ each.

TURN TO ROCHESTER STEEL TUBING . . .



your #1 pipeline to FORMING FACILITIES

Lower cost without lower quality — that's what Rochester Steel Tubing's serpentine forming facilities offer refrigeration people. The secret is in our extensive and unique multiple forming facilities, coupled with tubing know-how. Result: lower cost, meaning real savings to you. Add to this Rochester Steel Tubing's rotary-straightening facilities and you get flat-as-a-pancake serpentines held to close dimensional tolerances. This speeds up wire welding for higher production and more savings. Such facilities and such care help give meaning to Rochester Reliability: to provide you with refrigeration tubing that works the way you want it to work for as long as you specify. More details? Write or wire Rochester Tubing Sales Manager.

GM

Rochester Reflects Reliability

GENERAL MOTORS

STEEL TUBING BY ROCHESTER PRODUCTS

ROCHESTER PRODUCTS DIVISION OF GENERAL MOTORS. ROCHESTER. NEW YORK

In 15 Schools

New York City Board of Education Uncovers Heating Deficiencies

NEW YORK CITY—Heating deficiencies in 15 schools built or modernized since World War II have been uncovered by the New York City board of education.

The board's revelation came amidst a rash of public investigations into the admittedly deplorable state of New York City school buildings. Only 20 out of 860 schools failed to report urgent repair and maintenance problems.

Heating problems in 24 other schools are under investigation.

NEWS readers are invited to write to the editor giving their opinions on any subject of interest to the industry.

According to the New York *Herald Tribune,* Dr. John J. Theobald, superintendent of schools, said that in the last four months, architects, engineers, and contractors have been backcharged $7,432 for corrective work on defective heating plants at three schools.

Tentative backcharges of $33,941 at 12 other schools will be determined after hearings, the newspaper added. Under the school board's building contracts, contractors and engineers can be made to pay back sums spent to correct defective construction work.

In addition to the school board's own investigation into the shoddy condition of public schools and the integrity of its construction inspectors and supervisors, three outside bodies are poking into the situation.

One represents the city, one the state, and a third the district attorney.

Charges are flying of alleged payments by contractors to inspectors to get their work approved and to other school employes to get their vouchers approved for payment. At least one heating contractor has been named as involved in such "gifts."

As a result of such charges, 27 construction firms have been blacklisted by the board of education from participating in any further school work. The firms involved have retaliated by suing the board to prevent such blacklisting.

As these firms are currently bidding on new school work, the board has ordered all construction stopped until the court decides on the legality of its action.

Circulation 3.5 Million

Du Pont 'Guide to Air Conditioning' Appears In June Issue of 'Coronet'

WILMINGTON, Del.—To pave the way for more air conditioning sales this summer, the "Freon" Products Div., E. I. du Pont de Nemours & Co., Inc., has placed an eight-page "Guide to Air Conditioning" in the 3.5 million copies of the June issue of *Coronet* magazine.

The insert advertisement tells readers of the benefits they will receive from air conditioning—home, room, or auto. It provides them with a simple home cooling survey form and suggests they take it to their local air conditioning contractor.

At the same time, du Pont has made additional copies of the pocket-size "Guide" available to dealers and contractors for use as a giveaway or a direct mail piece. Copies may be obtained from equipment distributors or ordered from du Pont at $2 per 200 copies.

The company has urged all air conditioning dealers to take advantage of the Guide's impact by pinpointing their own business as the place to buy air conditioning.

It offered several suggestions for doing this.

One is through newspaper advertising to be run automatically when local temperatures rise above a certain point. For this purpose, du Pont offers dealers four free ad mats in various sizes available through their equipment distributor or through du Pont.

Another is through radio and television spots when the weather turns hot.

Another is through direct mail. Mailings should be limited to 275 to 300 people at a time so that salesmen can follow up close upon the heels of the advertising, du Pont recommends. The company suggests three mailings, a week apart, rather than a single mailing for greatest impact.

A fourth is to arrange a display at your commercial installations that draw the public, such as stores, theaters, or restaurants, crediting you with the installation and suggesting that you can provide the same comfort for their homes.

A fifth is to get and use decals, signs, and banners provided by equipment manufacturers.

The Guide, headlined "Climate for Better Living," makes its points in short, simple copy blocks. Every page contains two or three pertinent and amusing cartoons.

The booklet answers the question "Why comfort conditioning?" It continues by outlining how comfort is provided through cooling, dehumidifying, cleanliness, and better health.

It suggests that air conditioning may cost less than the reader might think. For a rule of thumb on costs of central home air conditioning, the Guide tells the reader to "figure 50 cents to 70 cents per sq ft of living area in new homes and 60 cents to $1 in existing homes."

The booklet tells how purchases can be financed and puts in a word for room air conditioners and auto air conditioners.

It concludes with a home comfort survey form which it tells the reader to take to his air conditioning contractor.

4-Page Folder Covers Industrial Coatings

RACINE, Wis. — The Service Products Div., Johnson's Wax here, has announced the availability of a four-page folder describing 18 special industrial coatings, "many of which have problem-solving applications for manufacturers of air conditioning, heating, plumbing, and similar supplies, whether of metal, rubber, plastics, or most other materials."

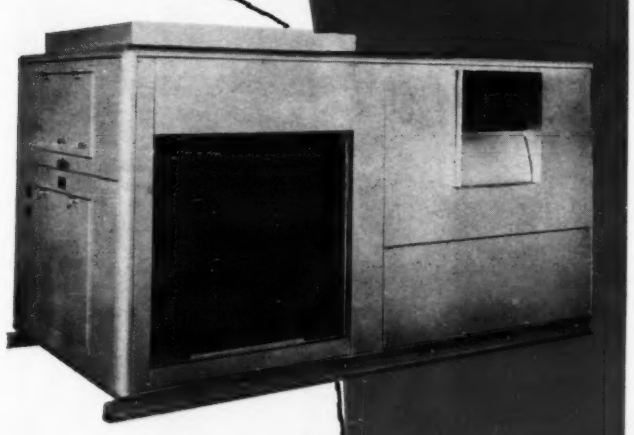
"SATISFABRICATED" BY Governair

NEWEST ADDITION TO THE INDUSTRY'S LEADING SELF-CONTAINED LINE.

COMPLETELY SELF-CONTAINED

AIR COOLED

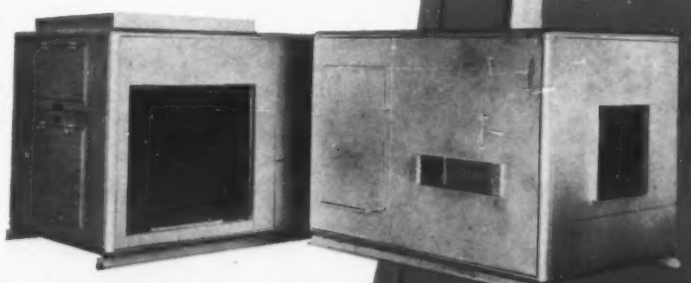
PACKAGE UNIT TYPE SCAC



GOVERNAIR'S SCAC is available in six basic models from 10 through 40 ton capacities. Typical GOVERNAIR flexibility has been maintained with a choice of 4, 5, or 6 row cooling coils offered to meet all capacity requirements. Roof mounting has been considered in the Low-Silhouette arrangement.

The basic one-piece cooling unit is housed in a rugged weatherized cabinet and mounted on rails. It is completely wired, charged and tested at the factory. Demountable and remote arrangements are available, and accessories include choice of filters, face and by-pass dampers, reduced voltage starters, Low Ambient Control, and the Gas Fired Furnace Section.

YEAR-'ROUND AIR CONDITIONING is accomplished by the use of the gas-fired furnace section. This accessory consists of a complete and unaltered gas-fired duct furnace housed in a Weatherized Cabinet with an integral by-pass damper arrangement. Refrigerated air may completely by-pass the furnace, while any desired amount of air is diverted through the furnace during the heating cycle.



FOR AN INFORMATIVE FOLDER, CONTACT YOUR LOCAL GOVERNAIR REPRESENTATIVE OR WRITE

GOVERNAIR

4840 N. SEWELL
OKLAHOMA CITY

Week-Long 'Selling Circus' Kicks Off Air Conditioner Sales Drive

Campaign Moves 87 Units, Gets Hundreds of Leads

ST. PETERSBURG, Fla.—The Montgomery Ward outlet here recently kicked off its room air conditioner season with a week-long "selling circus" that moved 87 units and produced hundreds of leads for future follow-up.

Focal point of the promotion, which could be adapted for any type of packaged air conditioning, was a gaily-decorated circus tent located outside the main store from which salesmen dressed as ringmasters hawked the virtues of Carrier air conditioners in true midway style.

Inside the store, a huge arrow-shaped balloon steered customers to a "cooling center" where Carrier units were displayed in mock-up window or through-the-wall installations.

Balloon Campaign Offers Prizes

Periodically during the first two days of the promotion, bright colored helium-filled balloons were sent aloft with messages urging finders to visit the store and become eligible for a variety of prizes.

First prize, to the person returning a balloon from the most distant point and writing a few words on "Why I like Carrier air conditioners," was a Carrier room unit. Other prizes included a $100 quarter-carat diamond ring, two live monkeys, and up to $20 in merchandise.

"The first week's sales were very encouraging," reports Robert Harris, air conditioning sales manager for the store, "but the future possibilities are even better. We believe the promotion identified us as a large dealer in Carrier room units and will result in additional sales all summer long."

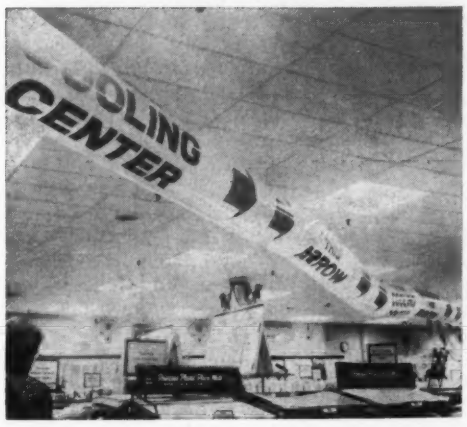
2-Way Radio Used Between Tent and 'Cooling Center'

To speed up sales and answer customer questions more quickly, Harris set up two-way radio communication between the tent and the "cooling center." Assisting the Ward salesmen at both locations was a representative of the local Carrier distributor, Florida Air Conditioning, Inc., who used a special slide rule designed to select equipment according to room size, amount of glass, and exposure to sunlight.

Throughout the promotion, Ward's offered free coffee and yardsticks to customers, who also helped themselves to peanuts from a large barrel, either for their own consumption or for feeding the monkeys.

Harris says the indoor "cooling center" display proved to be an effective contrast to the outdoor circus tent operation where both crated and uncrated units were stacked nearly to the canvas top for quick sale.

"Many customers attracted by the outdoor carnival atmosphere became buyers after they visited the indoor display and saw how the units looked in typical household installations," he said.



LONG BALLOON stretched across ceiling at Montgomery Ward store in St. Petersburg, Fla. directs customers to the "Cooling Center," where Carrier room air conditioners are displayed during a week-long promotion to open the room unit selling season.

END OF THE LINE for customers following the giant balloon is this "Cooling Center" where Carrier room air conditioners are displayed on shelves or in mock-ups of typical window or through-the-wall installations.

MONTGOMERY WARD SALESMEN release the first of 200 helium-filled balloons which carried messages urging finders to visit the store during a week-long promotion to sell Carrier room air conditioners. Each balloon contained instructions on how the finder could win a Carrier unit or one of several other prizes.

GENERAL ELECTRIC CORP. • WESTINGHOUSE ELECTRIC CORP. • PHILCO • WHIRLPOOL CORP. • ADMIRAL CORP. • AMANA
NORGE CORP. • GIBSON REFRIGERATOR • GLASCO • VICTORY METAL MFG. CO. • WILSON REFRIGERATOR • VICTOR PRO
WARREN CO. • CARRIER CORP. • HALSEY TAYLOR • REMINGTON CORP. • ADDISON PRODUCTS • AMERICAN FURNACE CO
BALLY CASE AND CO • MFG. CO. • COLEMAN COMPANY • PEERLESS OF AMERICA • R
CHRYSLER AIRTEMP • FEDDERS CORP. • HOT POINT • C. V. HILL • IDEAL DISPENS
KOCH REFR. • LaCRO • NORRIS DISPENSERS • RANNEY REFRIGERATOR • PURO FI
QUICFREEZ • REVCO • SUB ZERO MFG. • STEWART WARNER CORP. • YORK CORP. •
VENDORLATOR MFG. • AL ELECTRIC CORP • WESTINGHOUSE CORP. • PHILCO • WHIR
ADMIRAL CORP. • A • GIBSON REFRIGERATOR • GLASCO • VICTORY METAL MFG. C
WILSON REFRIGERAT • CARRIER CORP. • HALSEY TAYLOR • REMINGTON CORP. •
ADDISON PRODUCTS • SE AND COOLER • BEN HUR MFG. • BLISSFIELD MFG. CO. •
COLEMAN COMPANY • RADIO • FEDDERS CO
VENDORLATOR MFG. • P. • PHILCO • WHIR
ADMIRAL CORP. • MFG. C
WILSON REFR • ORP. •
FEDDERS CORP. • RAY REFRIGER
NORRIS DISPENSERS • RG CORP. • STAR C
ADDISON PRODUCTS • BLISSFIELD MFG. CO. •
COLEMAN COMPANY • AIRTEMP • EBCO MFG. CO. • EMERSON RADIO • FEDDERS CO
SUB ZERO MFG. • STEWART WARNER CORP. • YORK CORP. • VENDORLATOR MFG. CORP. • FRANKLIN MFG. CO. • GENERA
GIBSON REFRIGERATOR • GLASCO • VICTORY METAL MFG. CO. • WILSON REFIGERATOR • VICTOR PRODUCTS • WARREN C
ADDISON PRODUCTS • AMERICAN FURNACE CO. • BALLY CASE AND COOLER • BEN HUR MFG. • BLISSFIELD MFG. CO. •
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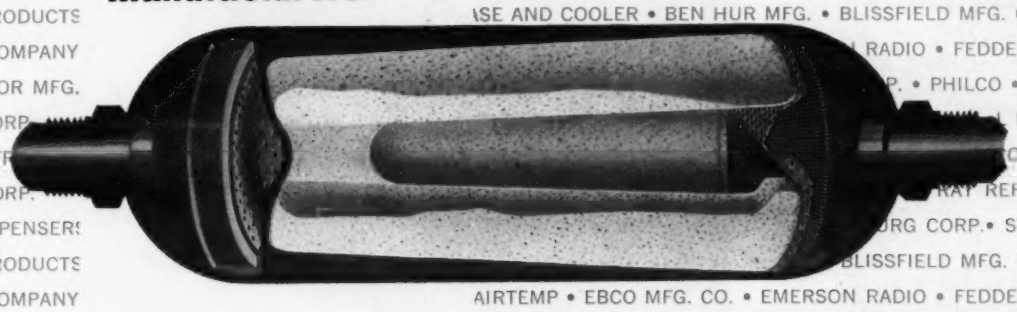
KMP

World's Largest Manufacturer of Refrigeration Driers . . . Supplier to the Leading Manufacturers.



KMP **FILTER-KORE**... *the only*

100% solid core Molecular Sieve Drier

No other driers have these exclusives:

★ **LOWEST PRESSURE DROP**
per unit area of core of any block desiccant

★ **LARGEST DRYING CAPACITY**
per cubic inch of core of any block desiccant

★ **GREATEST ACID REMOVAL**
Maximum protection of system from acid and sludge after motor burnout

★ **HIGH TEMPERATURE WATER CAPACITY**

★ **ALL NON-CORROSIVE INTERNAL METAL CONSTRUCTION**

BECAUSE...

FILTER-KORE DRIERS

★ have no plastics . . . no fibre board . . . no cotton or other foreign material

★ have no diluents . . . just a solid core of 100% pure molecular sieve

★ have selective filtration . . . no powdering . . . no channeling.

FILTER-KORE... the most efficient, most trouble-free refrigeration drier made.

KMP **KENMORE MACHINE PRODUCTS, INC.** • LYONS, NEW YORK
IN CANADA: Kenmore Machine Products (Canada) Limited, Grimsby, Ontario
IN EUROPE: Kenmore Inc., A.S., Oslo, Norway

Inside Dope

By GEORGE F. TAUBENECK

(Continued from Page 1)

One little bee was independent. He flew around the corner to an Esso pump.

"There's always one Esso Bee in every organization" is the moral to this anecdote.

Stories of the Week

Hoping to improve his sermons, a young minister had a Sunday service tape-recorded.

That night, after dinner, he sat in a comfortable chair and listened to the playback. He heard the hymns, the responsive reading, the offertory prayer.

Upon awakening, he discovered he hadn't heard a word of his sermon.

Commuter who lived in an area occupied by "gentleman farmers" hallooed one of the latter.

"My car won't start," he approached, "but if you'll let me run across your field, I can make the 7:45 to Manhattan."

"OK," said the man. "But if my bull sees you, you'll make the 7:29."

Engineerese Is the Curse of The Educated Classes

Business paper editor of our acquaintance, driven half nuts by the obscure technical jargon in which so many technical "papers" are written, retaliated with this memo:

"There has come to my attention a marvelous mechanical contrivance which, by means of pedal impulsion from controlled fulcrum leverage converts vertical reciprocating motion into highly accelerated concentric circular movement in a vertical plane.

"Power thus transmitted to the axis impels the periphery causing a continuous momentum which upon impact modifies the physical structure of ferrous substances with a high carbon percentage as the essential alloying constituent.

"I refer, of course, to the grindstone."

Sensible Remarks

Nothing ruins a neighborhood for the average husband like having an enthusiastic gardener move in.

There can never be peace where money, place, pleasure, and power are the whole object of human pursuit.—CYRIL NORWOON.

The big things in life are never done by fussy people; poise is one of the earmarks of mental strength. — DOUGLAS GUARDIAN.

If one is ever to find enjoyment in life, one must take advantage of the opportunities for happiness as they arise. This gives one the fortitude to endure the less favorable times with faith and hope that they will again improve.—*Nuggets.*

Add Newspaper Boners

He was acquitted when the prosecution forgot to establish that he had no license to sell his peanuts, popcorn and lice cream.—*New York World-Telegram & Sun.*

Rep. Kearns Sits Pat on Squatters' Rights. — *Greenville* (S. C.) *News.*

He was arrested by the FBI on charges of aiding and agetting.—*Tampa Tribune.*

Personal Anecdotes

Tired of working for others, this fellow went into business for himself. Later a friend asked him what it was like to be his own boss.

"The police won't let me park in front of my own place of business," he sighed. "The tax collectors tell me how to keep my books; my banker tells me how much balance I must maintain; freight agents tell me how my goods must be packed; customers tell me how my products should be altered.

"The union tells me who I can work and how and when; and, on top of that, I just got married."

Following several earthquake shocks in their neighborhood, a Japanese couple sent their little boy to an uncle who lived far away in the countryside.

Days later his parents received this telegram:

"Am returning your boy. Please send earthquake."

Motorcycle cop halted a lad in a Mercedes 320 SL who had been cruising the Los Angeles freeway at better than 100 mph.

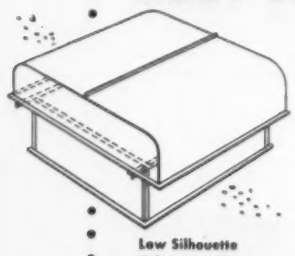
When the officer approached with his ticket, the college boy (in horn-rimmed glasses and Ivy League cap) peered out to ask:

"Why do you stop me, Earth Man?"

Bundy can mass-fabricate practically anything

GET RICH

WINDMAKER ROOF FAN



- Low Silhouette
- Exhausts 4 Sides
- Quietest Operation
- BLADE SIZES: 20", 24", 30", 36", 42", 48", 54"

PHIL RICH FAN MFG. CO., Inc.

Phone FAirfax 3-9181

2900 CAROLINE HOUSTON 4, TEXAS

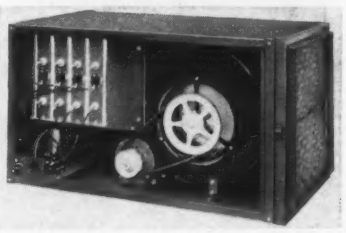
'Luxaire' Furnaces Can Be Installed for Horizontal, Upflow, Counterflow Use

6 Models Offered

ELYRIA, Ohio — A complete new line of "Luxaire" electric winter air conditioning units has been introduced by The C. A. Olsen Mfg. Co.

Six units with electrical inputs of from 5 to 35 kw and with output ratings ranging from 34,150 to 119,525 Btuh comprise the new Series "E," Luxaire electric line.

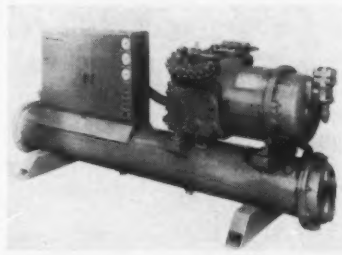
The units can be installed in either the horizontal, upflow, or counterflow position. The cabinets are exceptionally compact, measuring 34 in. by 20 in. by 20 in. for the three smaller sizes or 42 in. by 25 in., by 25 in. for the three larger sizes, the company said.



HORIZONTAL POSITION: Panels removed, showing wiring terminals, sequencer control panel, ends of heating elements, blower and motor and slide-out filter frame.

The smaller capacity units have a 10-in. standard equipment blower and provide air handling capacity for up to 4 tons of cooling. The three larger units are equipped with a 12-in. blower as standard equipment and have air handling capacity up to 5 tons. A slide-out filter frame is supplied as standard equipment, according to the manufacturer.

Westinghouse Hermetic Condensing Units Designed for Commercial, Industrial Use



WESTINGHOUSE model CNU hermetic condensing unit.

STAUNTON, Va.—A new line of hermetic condensing units (model CNU) is available from the air conditioning division of Westinghouse Electric Corp.

The units, in ratings from 20 to 60 tons, are designed for use in field assembled commercial and industrial air conditioning equipment. Suction operating temperatures from 20 to 50°F are standard. Temperatures outside this range are available for special applications as required.

There are six voltage ratings at three phase, 60 cycles: 208, 220, 240, 440, 480, and 550; at three phase, 50 cycles, three ratings: 220, 380, and 400. All units are equipped with either line-start or part-winding-type starters.

Each condensing unit consists of a water-cooled condenser, a Type CLS hermetic compressor, and a control center. It is factory assembled, completely pre-wired and pre-piped, and includes vibration mountings under the compressor. Starters, safety controls, gauge panel, and internal control and power wiring between control center and compressor are included as standard items.

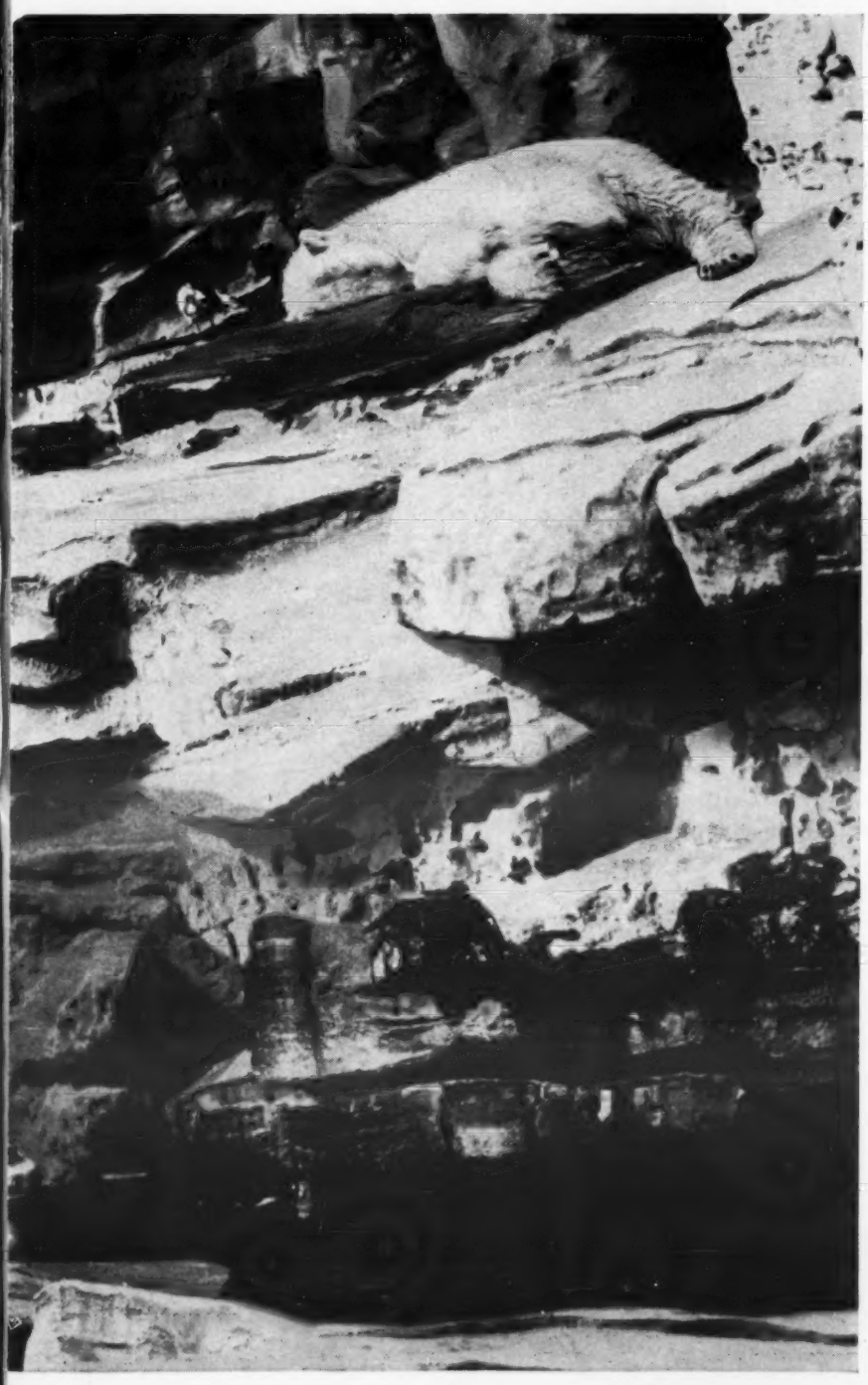
"Guardistor" motor protection is included to provide positive motor winding protection against overheating. In addition, each compressor is equipped with quick-trip overload relays for split-second protection against excessive instantaneous motor currents, the announcement said.

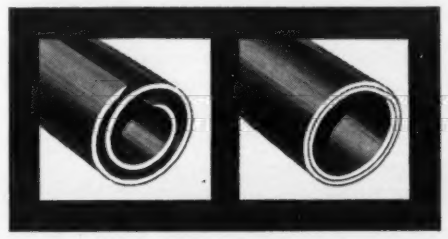
The water-cooled condensers are constructed under the ASME construction code, and the compressors meet all ARI requirements and ASA-B9 codes, it was stated. In addition to the hermetic condensing unit package, the compressors and control centers used in this series are available separately.

Complex or simple—regardless of the shape—your tubing components need precision bending to fit fast and fit right on your production line. ¶ Bundy turns out parts like these by the thousands or millions . . . at a remarkable low unit cost. These tubing components are made from Bundyweld®, the only tubing of its kind that's backed by years of manufacturing experience and accepted as the safety standard of the refrigeration industry. Bundyweld steel tubing is covered by ASTM 254 and Government Specification MIL-T-3520, Type III. ¶ Next time you need tubing, phone, write, or wire: Bundy Tubing Company, Detroit 14, Michigan.

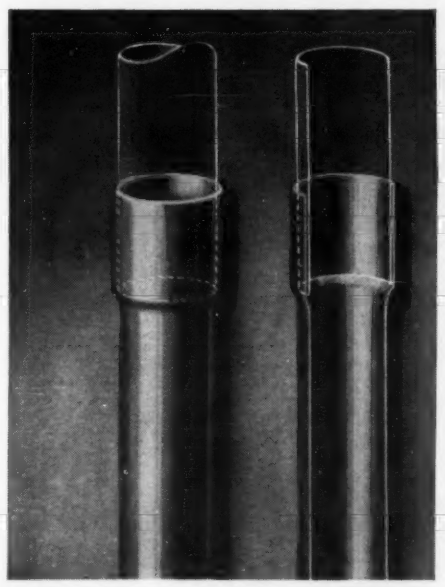
BUNDY TUBING COMPANY • DETROIT 14, MICH. • WINCHESTER, KY. • HOMETOWN, PA.

World's largest producer of refrigeration tubing. Affiliated plants in Australia, Brazil, England, France, Germany, Italy, Japan.





Bundyweld, double-walled from a single copper-plated steel strip, is metallurgically bonded through 360° of wall contact. It is lightweight and easily fabricated . . . has remarkably high bursting and fatigue strengths. Sizes available up to ⅝" O.D.



The Bundyweld expanded connection makes tight joints possible with only one on-the-job operation. Note that the mating tube needs no reducing or sizing and that the flow through the finished joint will remain completely unrestricted.

BUNDYWELD® TUBING

BHC Names Foster Field Services Director

NEW YORK CITY — Bruce Foster has been appointed director of field services of the National Better Heating - Cooling Council, it was announced by Franklin Greene, executive director of the hydronics industry marketing - promotion group.

B. Foster

Foster will coordinate the promotion activities of the National BHC with the nine local BHC's now operating in Baltimore, Chicago, Cleveland, Detroit, Milwaukee, Minneapolis, New York City, Philadelphia (Delaware Valley), and Seattle - Tacoma (Puget Sound). He will also be responsible for the development of new councils.

Foster joins BHC after almost two years with Edison Electric Institute where he worked on the "Live Better Electrically" program. He replaces Fred Richard who left the council to join Slant/Fin Radiator Corp.

Rebuilding Shop

Misapplication or Improper Installation Seen as Greatest Cause Of Unit Failure; Skilled Labor for Repair Is Firm's Major Problem

By Frank J. Versagi

ATLANTA — "After rebuilding thousands of compressors and condensing units over the last 17 years, we are convinced that the greatest single cause of unit failure is misapplication or improper installation."

This opinion comes, not from a manufacturer, but from Miss Bobbie Bailey, manager of Our-Way Machine Shop here who rebuilds for General Electric and 22 other manufacturers. Our-Way also rebuilds Tecumseh and Frigidaire compressors, but facilities for each are maintained in separate buildings.

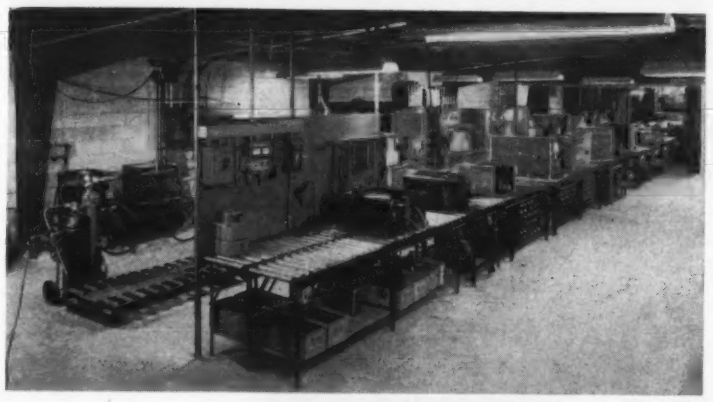
"Our total facilities allow us to turn out an average of 145 rebuilt air conditioners or heat pumps a week, about 100 full hermetics, and 125 semi-hermetics a week," Miss Bailey states.

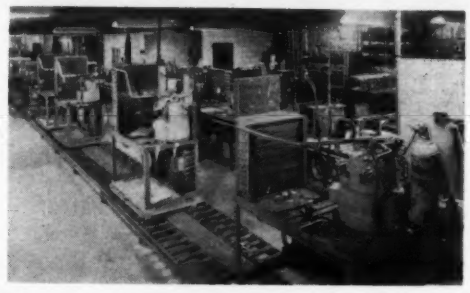
Our-Way is maintaining its position, and growing in stature, while the trend is *away* from rebuilding stations as more manufacturers turn toward allowing field repair of components. "Only a very few manufacturers any longer insist that the entire cycle be replaced when something goes wrong," the manager explains.

The rebuilt units or compressors are returned to the distributor who originally authorized sending it in for repair, but Our-Way's financial transactions are with the manufacturer, rather than the distributor. Different methods of payment are used, depending on the circumstances. Common method of payment is a flat rate for major or minor repairs.

Most Returned Units ARE Defective

Another point made by Miss Bailey is that most of the units returned to her as defective *are* defective. This is unlike the experience of many factory shops which report that as many as one-third of the units returned are not defective and could have been serviced in the field.





TWO INTERIOR VIEWS of Our-Way Machine Shop show the window unit line and the commercial unit repair line.

What are some of the problems encountered in operating a rebuilding station? In fact, what is the greatest single problem, the NEWS asked.

Even Experienced Serviceman Isn't Adequately Trained

"Labor," Miss Bailey quickly replied. "Even a man experienced in commercial refrigeration service or air conditioning service is not quite trained enough for effective use in a rebuilding station." In peak season, Our-Way employs 96 persons. Our-Way must do all it can to retain its most skilled workers, because "if you let one go during a slack period, you naturally aren't going to get him back."

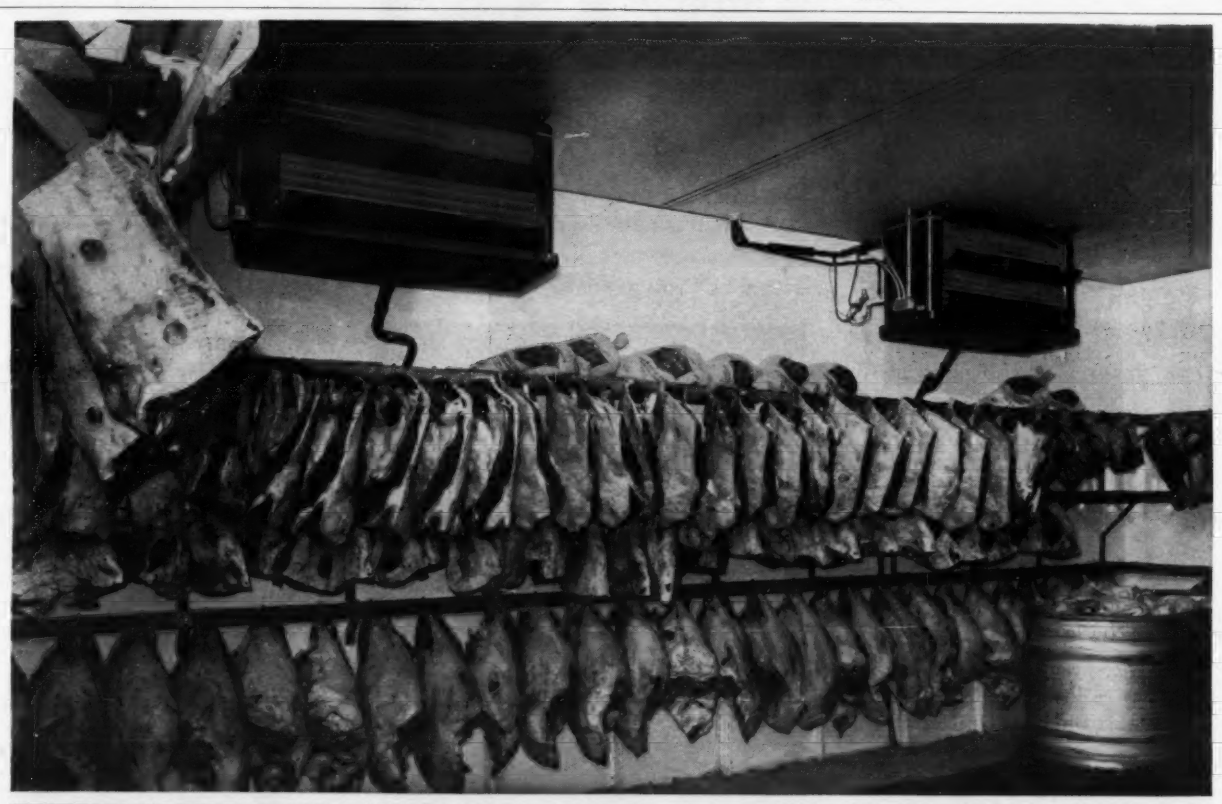
Asked to name the most skillful classifications in Our-Way, she listed the analysis man and the final performance man.

"Every unit which comes in, no matter from whom and no matter what is said to be wrong with it, is analyzed by us to determine the exact difficulty. Similarly, the unit is completely performance checked after rebuilding. Important, too, is the man who checks final appearance, since the units must look as good as new, since they are, in effect, new when they leave us."

Our-Way handles units and compressors from ¼-ton to 60 tons' capacity. While it rebuilds open-type compressors, "this end of the business is falling off regularly."

An incoming unit is first sub-

(Continued on Page 11)



LARKIN MLT meat storage program saves money for retailers, makes money for refrigeration dealers

The retail meat industry is extremely enthusiastic about Larkin's new program for proper meat storage using the new LARKIN MLT System.

Astonishing graphic proof of the results obtained in two years of research and testing have sold this system to large chain and independent operations. Here's what the system does:

- CUTS MEAT SHRINKAGE
- REDUCES TRIMMING WASTES
- RETAINS BLOOM OF MEAT
- IMPROVES SHELF LIFE
- INCREASES PROFIT

The industry is buzzing. Stores are not only adopting the program for new construction but are also finding it profitable to convert existing systems.

LARKIN is ready to help you capitalize on this *new* source of revenue. Literature that tells the story, *sells your prospects,* is available to all LARKIN dealers.

Get in on the ground floor. See your wholesaler or write direct for Bulletin MLT-1061.

MAN'S GOOD OF THE NATION'S FOOD AND COMFORT — LARKIN

LARKIN COILS INC.

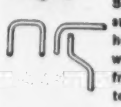
519 Memorial Drive, S.E. • P. O. Box 1699 • MUrray 8-3171

ATLANTA 1, GEORGIA

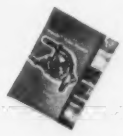
Handy Tube Bender

Smoothly Bends any pipe or Tubing ⅜"-1⅛" O. D.

• Just a twist of the wrist assures perfect, even bends — right angle, any angle, U and offset. Save enough on ONE job to pay for your HANDY BENDER.



See your supply house—or write for free folder today.

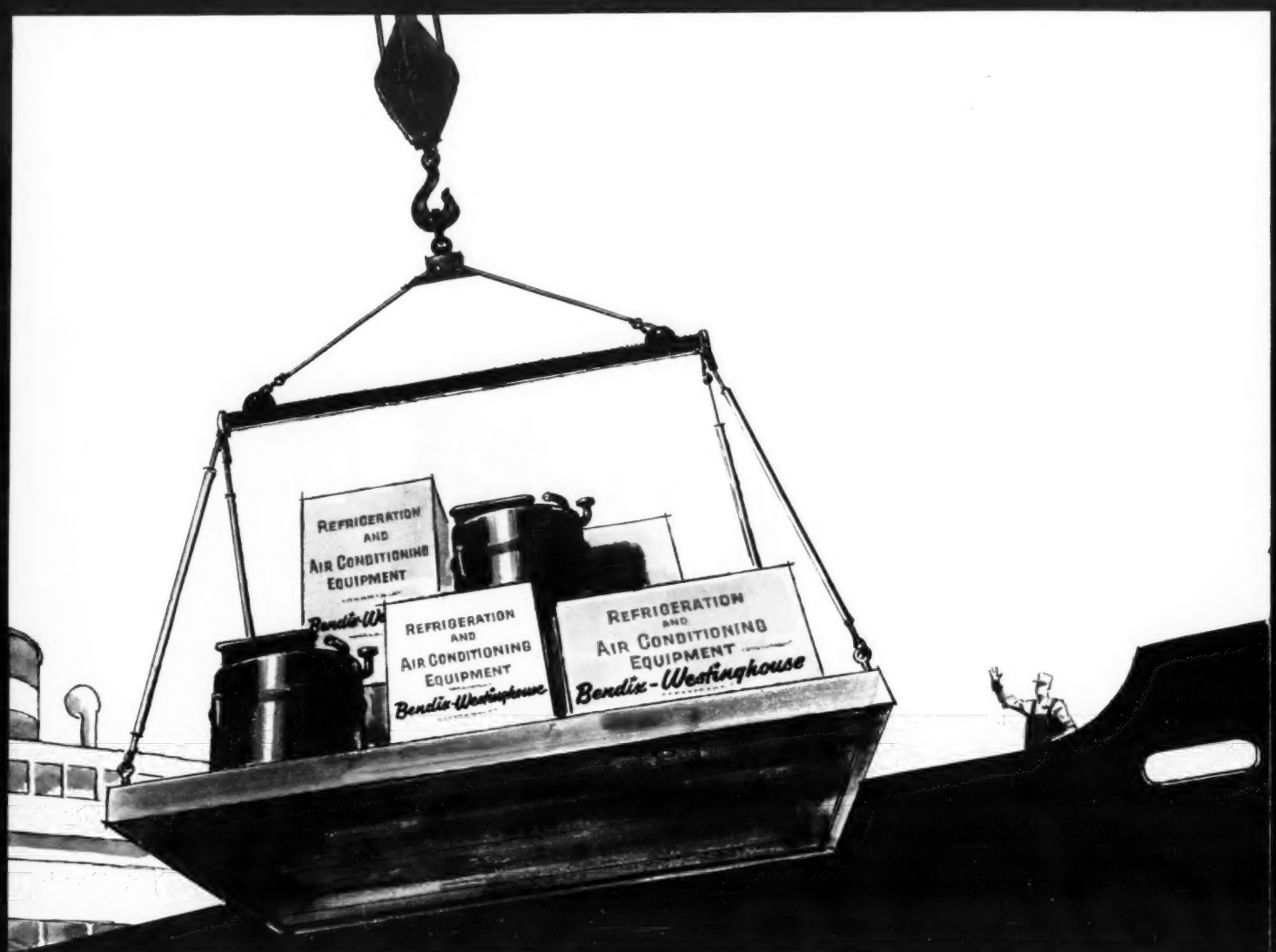


HOLSCLAW BROS., INC.

428 N. Willow Road • Evansville, Indiana

V. I. P. TREATMENT ALL THE WAY. Starting the minute we receive a compressor or condensing unit order, we make it our business to give each customer the finest possible service all the way—including on-time delivery. Want proof that this V.I.P. treatment goes with every order? Ask our users! For proof of advantages you get in a Bendix-Westinghouse compressor specially tailored for the export market, please turn the page.

Bendix-Westinghouse **MOTOR COMPRESSORS**



NEW . . . FOR THE EXPORT WINDOW AIR CONDITIONER MARKET! A 50-CYCLE BENDIX-WESTINGHOUSE COMPRESSOR!

If you sell window air conditioners overseas, you know that a standard 60-cycle unit plugged into a 50-cycle circuit loses considerable capacity. To overcome that drawback, we now offer you a true 50-cycle compressor for the export market.

This 1-h.p., 2-pole unit (model YCH153VA-8) is designed to supply a full 7,100 BTU's on 50-cycle operation. It also offers you all the regular features of Bendix-Westinghouse compressors for room coolers. These include: permanent bolt-down mounting; rugged, dependable valve construction; latest, best type motor insulation; and more easily serviced tubing connections and terminal box.

Our complete line contains models ranging from 6,100 to 15,000 BTU's. Besides permitting you wide design latitude, these models feature a quiet operation that makes them ideal for bedroom-window units. Write for full details today.

Bendix-Westinghouse

EVANSVILLE, INDIANA

A Division of Bendix-Westinghouse Automotive Air Brake Company, Elyria, Ohio

Export Sales: Bendix International, 205 E. 42nd St., New York 17, N. Y.; Peter A. Karl, Inc., Union Station Bldg., Utica 2, N. Y.; Sabal-Kielmann, Inc., 15 William St., New York 5, N. Y.

(Continued from Page 8, Col. 5)

jected to a complete analysis. Among the tests conducted is a test on the oil to detect acid. If acid is present, the unit is flushed out thoroughly before any further work is done on it.

Can Open 50 Cans per Day

Hermetic compressors are cut open on a lathe especially adapted to work on the oval and irregular contours of the welded housing. "We can cut open 50 cans a day on our lathe reports Claude Rhea, assistant manager, who guided the NEWS on the tour of Our-Way facilities. "We can get the same production, 50 a day, from our valve-lapping setup."

The innards of the defective compressor are sorted, whatever can be is salvaged, cleaned, degreased, and stored for reworking.

Rebuilt compressor parts, rewound stators, for example, are reassembled into a clean shell. Just before the unit is welded shut, the compressor is run-in, and it is run-in again after it is charged with clean, dry oil.

All through the rebuilding operation, Rhea pointed out the many testing facilities for components and complete units. Electronic vacuum gauges, "For 2,000 microns *rough* and 50 microns *deep* evacuation"; G-E electronic leak detector used in conjunction with refrigerant as tracer and 300 psi nitrogen; power supply panel which can give any of the common voltages and one, two, or three-phase power; a static pressure setup employing two 15-hp blowers which allows establishing a variety of test conditions for air-cooled units; a comparable water-cooled testing setup with sophisticated flow control; bake and vacuum facilities.

Parts Inventory Is Major Problem

At one end of the shop is an expanding storage area for parts.. "Parts inventory is another major problem for us," Miss Bailey explained. The necessity to store duplicate and replicate parts, each with an OEM's individual part number makes for a large inventory. So many of these items could be standardized — capacitors, relays, driers, thermostats come to mind."

Most of Our-Way's parts come from the OEM whose units are being rebuilt.

Last department is shipping, where the units are crated and sent off to the distributor or factory branch.

Does the increasing use of heat pumps reduce the unevenness of a rebuilding shop's work load by sending more units in during the heating season? "This would seem to be the logical outcome as heat pumps increase, but it hasn't happened yet," Miss Bailey concluded.

Herschel S. Frasher Dies

CLEVELAND — Herschel S. Frasher, 65, founder and president of Viking Mfg. Corp., died recently in Hanna House of University hospitals. The company, which was organized in Akron in 1930 and moved here in 1945, makes heating and air conditioning equipment.

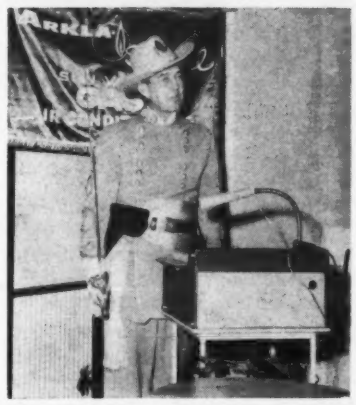
Arkla Road Show Promotes Gas Cooling

LITTLE ROCK, Ark.—Arkla Air Conditioning Corp. is using vaudeville - style showmanship, combined with a comprehensive program of education, to intensify "gas air conditioning consciousness" through the gas industry.

Company representatives are touring the country with the "Arkla Road Show," a series of oral presentations and skits dramatizing the main phases of gas air conditioning sales and describing proven successful sales programs.

The aim is to "carry the 'Arkla Gas Air Conditioning Story' to the grassroots—to every employe in the gas industry," according to W. G. Wepfer, company vice president and general sales manager.

The presentations, most of which involve the use of colored slides or props, cover such subjects as "How Gas Air Conditioning Works," "Prospecting," "Meeting Competition," "Market Eligibility," "Why Air Conditioning?" as well as the 1961 Arkla product line. The programs are scheduled throughout most of this year, Wepfer said.



ARKLA'S "ROAD SHOW" aims to depict the sales "war" between gas and its competitors for the residential and commercial air conditioning market, and the sales "weapons" available to merchandisers of gas air conditioning. Arkla representative Powers Kirven (above) carries out the war theme by opening up a Road Show garbed as a Confederate general.

"Although the Road Show is serving as a 'sales school' for company and dealer air conditioning staffs, it also is aimed at instilling 'gas air conditioning consciousness'—at giving every gas industry employe a basic working knowledge, as well as the 'big picture,' of gas cooling and heating," he said.

Arkla, in addition, is making the Road Show scripts and slides available to its gas company and dealer customers to use in making presentations to their employes and customers.

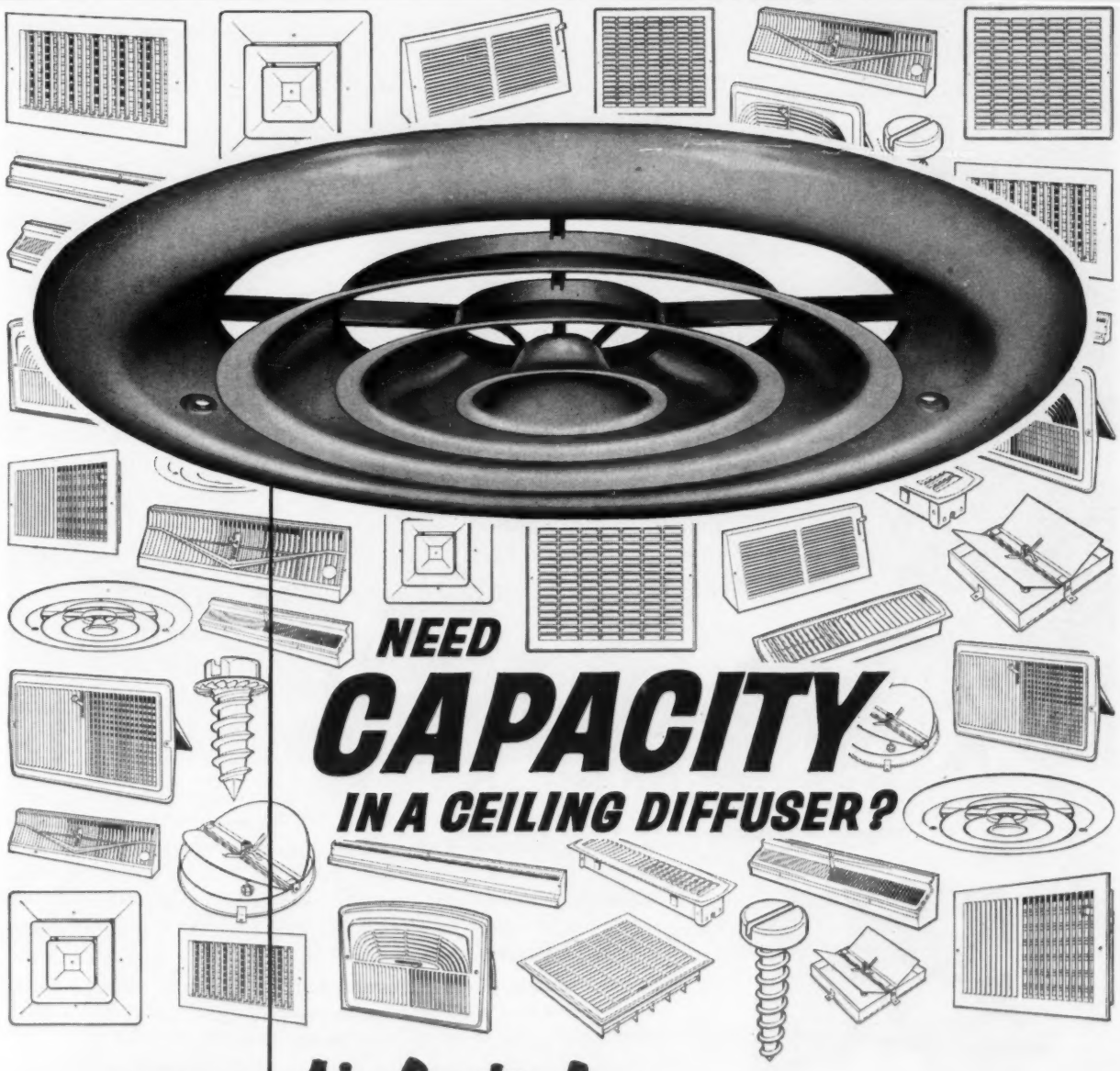
Spitzley Corp. Is Name Of Consolidated Firms

DETROIT — Consolidation of R. L. Spitzley Heating Co. and Spitzley - Rettenheimer Sheet Metal Co., Detroit and Lansing, under the new name of Spitzley Corp. was announced recently.

Officers are Joseph H. Spitzley, president; R. Lester Spitzley, vice president and secretary; Joseph Labbancz, vice president in Lansing; and Carl Redlin, treasurer and assistant secretary.

Du Pont Names May

WILMINGTON, Dela. — The appointment of Irenee D. May as a West Coast sales representative for Du Pont's "Freon" Products Div. has been announced by the company. He will make his headquarters in the division's Western district office in Palo Alto, Calif.



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These Ceiling Diffusers are examples of the progressive engineering devoted to each product in the line. Write today for your copy of Catalog 60-AC. It shows the complete line of Air Control Registers, Grilles and Diffusers.

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AIR CONTROL

AIR CONTROL PRODUCTS, INC. 361 CENTER STREET, COOPERSVILLE, MICH.

West Coast Warehouse: Leigh Industries (California), Inc., 649 S. Anderson Street, Los Angeles, California. MADE IN CANADA BY: Leigh Metal Products Ltd., 72 York Street, London, Ontario. Prairie Provinces Affiliate: Leigh Products Western Ltd., 313 Archibald Street, St. Boniface, Manitoba.

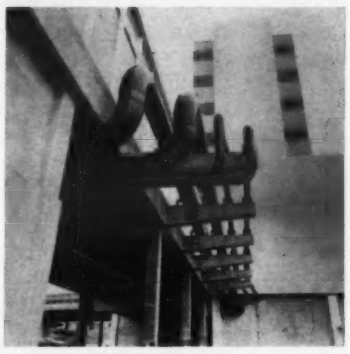
3,300 Welding Fittings, Flanges

$20,000,000 Atlanta Air Terminal Gets $2,000,000 Heating, Cooling System

ATLANTA—One of the largest heating and air conditioning systems in the South will help millions of passengers yearly keep cool, or warm, in season at the new $20,000,000 Atlanta air terminal.

Heating and cooling systems for the new air center and its three giant concourses required 17 miles of carbon steel pipe, according to Tube Turns Div. of Chemetron Corp., which forged more than 3,300 welding fittings and flanges for changes of direction and connections in the complex layout.

Air conditioned comfort will result from three 1,000-ton refrigeration units. Heat will be provided by a high temperature.



SHOWN HERE against the modernistic terminal tower are 18-in. lines carrying chill water and 6-in. lines carrying hot water under high pressure along one of the giant concourses extending from the main building at the Atlanta air terminal.

high pressure hot water system which operates between 350 and 400°F and at pressures up to 450 psi, it was pointed out.

The all-welded piping system, built to Air Force specifications, utilizes "extra strong" 6-in. diameter pipe with walls almost ½-in. thick to handle hot water under those conditions, Tube Turns said.

Heating and air conditioning for the new terminal cost over $2 million, according to the mechanical contractor, James E. Smith & Sons, Inc., Louisville.

Pipe sizes range from ¾-in. up to 20-in. diameter chill water mains to the terminal building from a separate mechanical services building.

Design and engineering of the new terminal were performed by Robert & Company Associates, Atlanta. The prime contractor is Blount Brothers Construction Co., Montgomery, Ala.

Expanding Apartment Construction

NWAHACA Offers 3 Suggestions on How Dealer-Contractors Can Approach Market

CLEVELAND — Warm air heating and air conditioning dealer-contractors can cash in on the rapidly growing apartment construction market, according to the National Warm Air Heating & Air Conditioning Association.

"While the building of new homes is in the doldrums, apartment house construction is gaining at a tremendous pace, and will continue to do so," NWAHACA said. "For the first 11 months of 1960, while the total of new dwelling starts slipped 18%, apartment house construction climbed to all-time records . . . over 10% ahead of 1959."

To dealer-contractors who determine to go after apartment business, National Warm Air offers the following suggestions for approaching this market:

"1. The decision about how to heat and cool an apartment nearly always starts with the architect rather than the builder. Talk to architects in your town about the advantages of ducted systems in apartment house construction, and the other comfort-assuring services and equipment you can offer in this field.

"2. Your friends at local banks or building and loan associations may be happy to put you in touch with owners planning to build apartments, or their architects and contractors.

"After all, raising the money to finance apartment construction is the first step in this activity, and the people who provide it have a big stake in the apartments that are built. You can benefit by telling them your ducted air system story.

"3. If you can sell the owner on ducted air comfort and your services, your problem in obtaining the contract is a much easier one."

New Rutgers Building To Be Air Conditioned

NEW BRUNSWICK, N. J.—Award of five contracts totalling $1,119,220 for construction of a new building for the Graduate School of Education at Rutgers, the state university, was announced by Dr. Mason W. Gross, university president.

The three-story building, scheduled to be in service in September, 1962, will be air conditioned throughout. The $289,618 contract for heating, ventilating, and air conditioning went to Frank P. Farrell, Inc.

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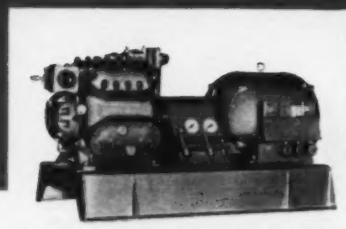
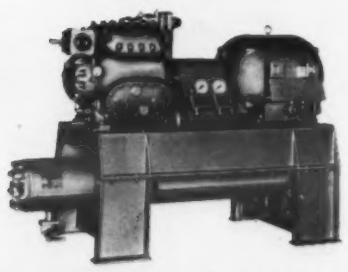
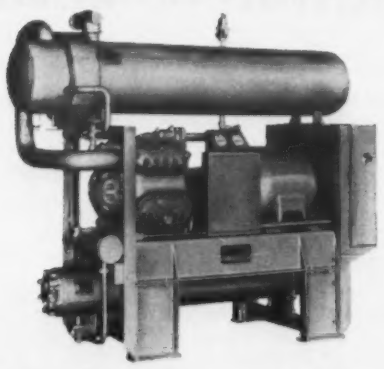


B&G Compressor plus B&G Motor becomes a B&G Motor Compressor.



B&G Motor Compressor plus B&G Condenser and base becomes a B&G Condensing Unit.



B&G Condensing Unit plus B&G Evaporator and Control System becomes a B&G Package Liquid Cooler.

In its M-Pak Modular Packages, B&G presents a new advance in efficiency designing of air conditioning and refrigeration equipment. M-Pak units are built around five basic sizes of open-type compressors. Factory-stocked motors, condensers, evaporators and controls can be added to these basic units to make a comprehensive line of "packages" of from 7½ to 150 tons.

For example, motor compressors are produced by adding a B&G-built motor to a B&G basic compressor. Further addition of a B&G condenser and a standard base makes a condensing unit.

All major components of M-Pak units are designed, manufactured, and guaranteed by B&G...*one* responsibility for the entire package. This, we believe, is an exclusive feature.

B&G also makes a complete line of refrigeration and air conditioning evaporators, condensers and centrifugal pumps—with many commonly used sizes available for immediate shipment from factory stock.

Send today for complete engineering and selection data on Bell & Gossett M-Pak* refrigeration and air conditioning units.

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Carrier To Develop Thermoelectric Air Conditioner for Nuclear Ships

SYRACUSE, N. Y. — Carrier Corp. has been awarded a $271,000 contract by the U. S. Navy to develop a thermoelectric air conditioner which will be suitable for operational testing aboard a nuclear submarine or a surface ship, the company announced.

Dr. J. F. Downie Smith, Carrier vice president in charge of research and development, said the new unit is intended to serve as a prototype for the development of a complete shipboard air conditioning system that would require no compressors, boilers, or other mechanical cooling and heating equipment.

The prototype will be designed for installation in air ducts serving one section of a vessel, in place of conventional air cooling and heating equipment. In a complete system, additional units of the same type would be installed in other areas of the vessel where air conditioning is needed, Dr. Smith said.

"The new unit will be far smaller in size than the average room air conditioner while delivering more cooling," it was pointed out. "In addition to saving space and weight in comparison with present-day submarine and surface ship air conditioning systems, it will operate with a minimum of noise.

Dr. Smith said the prototype thermoelectric air conditioner will be delivered to the Navy next spring.

This is the third phase in a series of thermoelectric air conditioning contracts given to Carrier by the Navy.

Dr. Smith predicted that when equipment of this type reaches the volume production stage it will be less costly since much of the initial expense is in development cost. Quantity production of thermoelectric materials also will substantially lower costs, Dr. Smith said.

Welbilt Shows Thermoelectric Prototype

MASPETH, L. I., N. Y. — Stockholders at Welbilt Corp.'s annual meeting here were shown the first prototype thermoelectric refrigerator-freezer developed by Welbilt's electronics development laboratory.

In a demonstration of the new portable unit, Alexander P. Hirsch, board chairman, said it was the first of a group of appliances Welbilt is planning for the mass consumer market. The unit features a 1½-cu ft refrigerator with a freezer compartment holding two ice cube trays having a 2-lb capacity.

Hirsch said that Welbilt is planning to produce the prototype unit in quantity for dealer distribution by 1962, at prices competitive with compressor type cooling equipment. (One report quoted Hirsch as saying the unit would be priced at about $150.)

Thermoelectric Component Price Cuts Announced

TRENTON, N. J. — Reduced prices on certain types of thermoelectric modules and rod material have been announced by Materials Electronic Products Corp. here.

"All Melcor materials and modules presently have an effective Z factor in fabricated couples of 3 x 10^3, giving temperature drops of 73°C to 77°C from 27°C in a vacuum," the announcement of the electronic manufacturer said.

The company expects to announce soon price reductions on all its thermoelectric component products.

C.W. Coker, Jr. Elected To Sonoco Board; 3 New VPs Named

HARTSVILLE, S. C.—C. W. Coker, president of Sonoco Products Co., announced the election of C. W. Coker, Jr., to the board as a director to fill the unexpired term of the late J. L. Coker.

In addition, three new vice presidents were elected—C. W. Coker, Jr., administration; P. C. Coggeshall, administration; R. B. White, production.

C. W. Coker, Jr. joined Sonoco in 1958 with the standards department. In 1959 he was named as assistant to the vice president.

Coggeshall has been director of purchasing since 1953. White in 1955 was named production manager. The firm's products include non-metallic ducts.

Dr. Robert A. Bernoff Sees Thermoelectric Boom by 1965

NEW YORK CITY—Thermoelectric refrigeration, heating, and power generation will become a booming industry by 1965, with annual sales reaching over $425 million. By 1970 annual sales will probably reach $3 billion.

This is the prediction made by Dr. Robert A. Bernoff, director of research, Materials Electronic Products Corp., Trenton, N. J., at a meeting here of technical magazine editors.

Dr. Bernoff said thermoelectrics "will have a good part of the industrial and military markets and will radically change the consumer electric refrigerator-appliance field."

Dr. Bernoff says typical household applications by 1965 will include thermoelectric kitchens with distributed cooling in refrigerated drawers, table-top chilling and warming of dishes. He looks for these industrial applications by 1965: Aircraft and truck cooling, cooling for industrial motors, and refrigeration for vending machines.

Military expenditures for thermoelectrics may reach $100 million annually by 1965, the electronics expert predicts.

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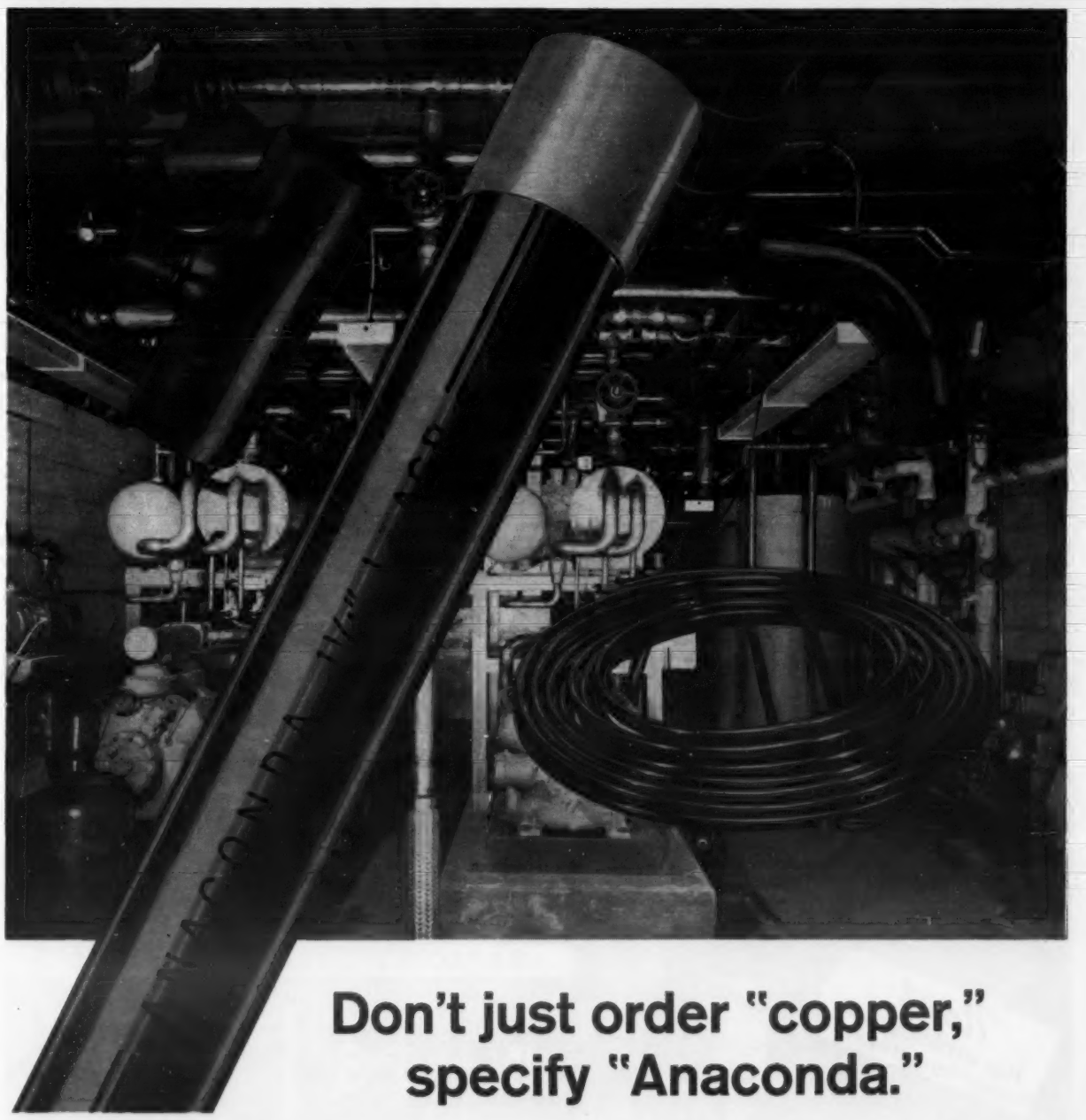

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Anaconda Copper Tube is the logical choice for air conditioning and refrigeration applications because it has excellent corrosion resistance and heat transfer properties; it can be formed and fabricated easily; it is suitable for making soldered, brazed and flared-tube joints; it can be provided in specified tempers.

You will find Anaconda's new ACR Copper Tube excellent for conveying refrigerants. It is sold cleaned, dried, capped, color-coded and marked ACR . . . in 20-foot straight lengths, hard temper, Type L, in sizes from ⅜" O.D. through 6⅛" O.D.

Anaconda Copper Refrigeration Tube is available in 50 and 100 ft. coils in sizes from ⅛" O.D. through 1⅜" O.D., dehydrated, ends sealed, and uniformly soft temper.

We also offer a complete range of types and sizes of Anaconda Wrought-Copper Fittings for refrigeration and air conditioning work. To be sure of a top-quality installation, specify Anaconda Tube AND Anaconda Fittings.

For complete information about Anaconda Copper Tube and Fittings, write for free copy of Publication B-1, Anaconda American Brass Company, Waterbury 20, Conn. In Canada: Anaconda American Brass Ltd., New Toronto, Ont. 61-729

ANACONDA®

COPPER TUBE AND FITTINGS
FOR REFRIGERATION AND AIR CONDITIONING

Anaconda American Brass Company

'Section-Freeze' Can Eliminate Need for Second Brain Operation

FIGURE 1

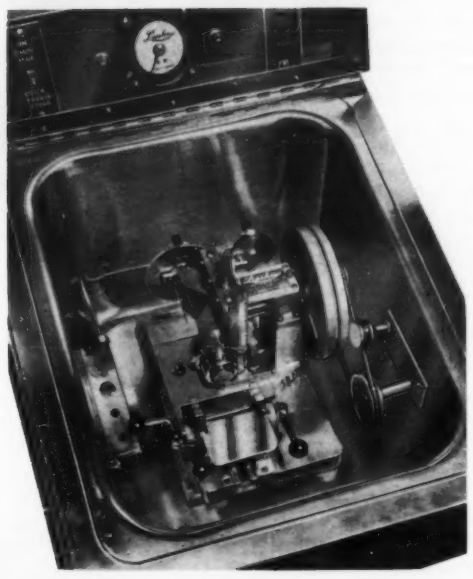

FIGURE 2

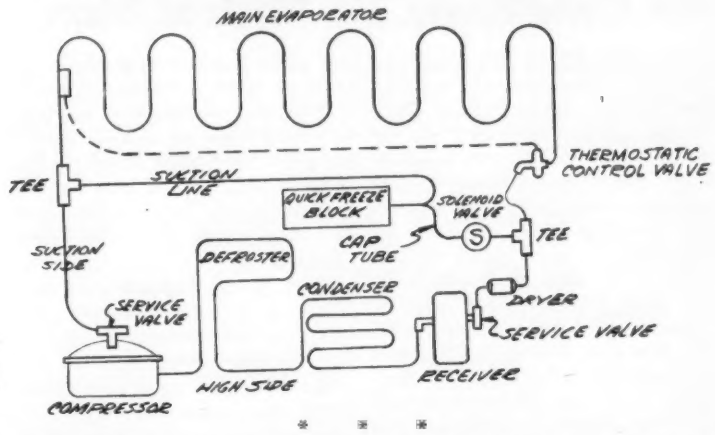

FIGURE 3

* * *

DETROIT—A ¼-hp condensing unit used to create sub-freezing temperature on a head 1⅝-in. square makes possible the pathological examination of tissue within minutes after its removal from the patient. By permitting the examination to be completed while the patient is still in the operating room, this "Section-Freeze" can eliminate the need for a second operation at a later date.

Where such urgency is not necessary, another low temperature medical fixture is used, the "CryoTome." In this unit, temperatures of -30°C (-22°F) are maintained with a similar condensing unit in a cold chamber 20 by 16 in. by 12 in. deep. A high precision microtome is mounted in the chamber and—observing his work through transparent plastic covers—the pathologist can freeze tissue sections, then take cuts as thin as 2 microns.

Equipment Requirements

Lipshaw Mfg. Co., 7446 Central Ave., Detroit, finds that the specific requirements of such refrigerated tissue-processing equipment as the Section-Freeze and CryoTome calls for "quite a bit of inventiveness and unorthodox procedures."

For example, the chamber of the CryoTome contains not only the microtome (also manufactured by Lipshaw) but a freeze plate with its own small refrigerant circuit. Temperatures on this plate approach -50°C (-58°F). While coils for the chamber are fed through a thermostatic expansion valve, the freeze plate is fed with capillary tube downstream from a solenoid valve; the solenoid and the expansion valve are each downstream from a tee in the liquid line.

Components

"On our first few units, while they were still under laboratory test, we were having difficulty with moisture," recall Lipshaw's chief engineer, Chester Rindfuss, and shop superintendent, James Farris. "We changed to Mueller Brass's 'Drymaster' and solved that problem. All our other components are the same as in the beginning—Alco expansion valve, Ranco controls, Tecumseh condensing unit, Marsh temperature gauges."

Because of the very low temperatures involved in the CryoTome chamber, it was necessary to devise a system to prevent

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CAPACITY CHANGE DISCHARGE TUBE
.093 ORIFICE DIAMETER
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New! FLAT WRENCH SUPER-HEAT ADJUSTMENT
ROUGHING IN DIMENSION 4½ x 2⅞

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2 discharge tubes—.093 orifice diameter and .120 orifice diameter are packaged with each ALCO TK THERMO VALVE for convenient "on the job" capacity changes.

CAPACITY CHANGES IN TONS

@ 100 F. CONDENSING — 40 F. EVAPORATION

VALVE No.	REFRIGERANT 12	VALVE No.	REFRIGERANT 22
TK 1 F	1.3	TK 2 H	2.2
WITH ORIFICE .120	0.6	WITH ORIFICE .120	1.0
WITH ORIFICE .093	0.3	WITH ORIFICE .093	0.5

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frost from flowing over the top of the chamber and from forming on the outside of the area where the microtome drive shaft comes through the housing. (The CryoTome is used like this: The medical technician places his tissue specimen on the freeze plate. When the tissue is frozen, he mounts it in the microtome. Driving the microtome by hand from the outside, he sections the specimen according to his needs.) The constant opening and closing of the lid makes frost build-up a problem in the chamber.

(On the Section-Freeze, only a small head is used to freeze the section; the section is then placed on a microtome in another location.)

The problem of frostover was solved by running a hot gas line around the rim of the chamber. At first they used a resistance element to defrost the outside area adjacent to the drive shaft, now a turn of the hot gas line around the shaft keeps the area frost free.

Figs. 1 and 2 show a view of the condensing unit and the interior of the CryoTome; Fig. 3 is a schematic drawing of the unit's refrigeration system.

Bakken Re-elected CABRA President

HOT SPRINGS, Va. — Glenn P. Bakken was re-elected president of the Copper & Brass Research Association here at this U. S. brass mill trade group's 39th annual meeting at The Homestead.

Bakken is president of Chase Brass & Copper Co., Inc. Re-elected senior vice president of CABRA was E. P. Dunlaevy, executive vice president of Phelps Dodge Copper Products Corp.

Newly named as CABRA vice presidents were Richard L. Allen, Bridgeport Brass Co.; Bailey I. Ozer, Viking Copper Tube Co.; Paul W. Robson, Wolverine Tube, division of Calumet & Hecla, Inc.; R. P. Winberg, Revere Copper & Brass, Inc.

Re-elected as vice presidents were Richard H. Lewin, Lewin-Mathes Co., division of Cerro Corp.; Joseph F. Murray, Reading Tube Co.; C. Lee Smith, The National Copper & Smelting Co.; Richard M. Stewart, Anaconda American Brass Co.; S. T. Williams, Scovill Mfg. Co.

R. L. Riggin, Sr., Mueller Brass Co., was re-elected CABRA treasurer, and T. E. Veltfort and Carl H. Pihl, were reappointed managing director and secretary, respectively. These 14 officers constitute CABRA's board of directors.

Long Beach Wholesaler Moves Warehouse, Office

LONG BEACH, Calif.—L. B. Marsh Allied Refrigeration is moving its warehouse and sales office to 730 W. Esther St., Long Beach, it was announced by the general manager, R. L. Nichols, of the refrigeration and air conditioning wholesaler organization.

For the past 26 years the firm has been located on Gaviota Ave.

Scholarships

JACK M. MENEELY, winner of a Stewart-Warner National Merit Scholarship Corp. college scholarship award, is shown receiving a $6,000 four-year scholarship certificate from William E. Judd (right), vice president of Stewart-Warner Corp. and general manager of the Heating & Air Conditioning Div. at Lebanon. Zenith Wheat, president of Local 4911, Lebanon, presents Jack with a certificate for a $2,000 scholarship awarded separately by United Steelworkers of America. Looking on is Jack's mother, Mrs. Lucile Meneely, an employe of the Heating & Air Conditioning Div.

'Comfort-Aire' Sales Representatives Named

JASKSON, Mich. — The appointment of five sales representatives for its "Comfort-Aire" central air conditioning product line has been announced by Heat Controller, Inc.

They are Kramer & Associates, Inc., Dearborn, Mich., for Michigan; A. J. Taylor, Little Rock, Ark., for Arkansas, northern Louisiana, and western Tennessee; Weldon Kite, Denver, for Colorado; Dean L. Hunzicker, Madison, Wis., for Wisconsin; and William Kennon, Kennon & Johnson Co., Atlanta, for Georgia and northern Alabama.

Chicago Distributor for Bell & Gossett Opens Office, Warehouse

CHICAGO — An important milestone in Chicago area distribution of Bell & Gossett heating and air equipment has been passed with the opening of a new distribution office and warehouse on Chicago's northwest side, the manufacturer reported.

The 10,500-sq ft facility, located at 7050 N. Lehigh Ave., is the new base of Bornquist, Inc., operated by George W. Bornquist, for 25 years Chicago metropolitan area distributor of B&G equipment.

"Until now, Bornquist has operated as a sales representative for equipment that had to be shipped out of B&G plants," it was pointed out. "Now, with the new warehouse, this equipment is made immediately available to Chicago area buyers.

"Bornquist's expansion into this new warehousing operation results from the steady growth in demand for B&G heating and air conditioning equipment in the Chicago metropolitan area. In addition to this expanded physical setup, Bornquist is also expanding its sales force by 25%."

Airtemp Names 2

DAYTON—Lee Epley, Chrysler Airtemp's director of advertising and sales promotion, has announced two department promotions.

Carl T. Miller has been appointed advertising manager and will be succeeded as sales promotion manager by John F. Zaino. Zaino was supervisor of advertising production.

IN TUBING— Nothing Beats Copper!

IN COPPER— Nothing Beats READING!

READING COPPER-BRASS TUBE

And RED BRASS PIPE

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Editorial

All-Year School Operation Is Making Progress

A DELUGE of young people may engulf our high schools and colleges within the next few years—unless something drastic is done soon.

That drastic solution is at hand, however, and fortunately it is relatively inexpensive. It's all-year operation of our institutions of higher learning. Three terms a year instead of two. Graduation in three years instead of four. Thus, an increase of 33% more students without strain, and without adding costly facilities.

Editorially, the NEWS began campaigning for this idea more than a year ago. And, in our home state of Michigan, signal results have been achieved already.

Tearsheets of these save-our-schools editorials were mailed to the Presidents of Michigan's leading universities and colleges. Encouraging correspondence ensued. Also, the idea was explained to good friends on Detroit's daily newspapers, both of which have published editorials commending the Trimester Plan. Those editorials got action —more quickly than expected.

Michigan State University (Oakland branch) announced adoption of the Trimester Plan last winter; followed by Kalamazoo College and Dearborn College. And now the mighty University of Michigan itself announces Trimester operation beginning in August of 1963.

President Clarence Hilberry of Wayne State University tells us that his big and progressive institution is well along in its Trimester studies. Watch other Michigan colleges fall into step!

Outside of Michigan, most progress has been made in Pennsylvania, where the University of Pittsburgh, University of Pennsylvania, and Penn State University have adopted the idea. Another notable recruit: the University of California.

Subscribers in Ohio, Minnesota, and Virginia have formed committees to spread the Trimester gospel. And so the ball which we tossed out continues to roll onward.

Carrier and Lennox have been pushing this idea at the high school level. They have staged clinics for school administrators and architects, where they've demonstrated convincingly that an air conditioned high school building costs less to erect and maintain than the old-fashioned varieties.

Twelve-months operation of high schools and colleges can provide these positive benefits to our nation (and especially to our children):

1. Increased enrollments can be accommodated without expensive new buildings or teacher recruitment programs.

2. Faculty salaries can be upped.

3. Students can arrange their programs more flexibly, and without paying higher tuition fees.

4. Taxpayers won't be knocked for a loop.

5. The air conditioning industry can serve a worthy cause profitably.

Obviously this pregnant idea deserves *further* and more widespread promotion by subscribers to the NEWS. Why should taxpayers, parents (and air conditioning contractors) in Michigan, Pennsylvania, California, Minnesota, and Ohio be the only beneficiaries of this ten-strike idea?

As matters stand now:

(a) Our upper school facilities lie idle three months out of each year, partly because classrooms are too hot and humid.

(b) Teachers work only nine months of the year. Hence they're underpaid; hence they're in short supply.

(c) A population-explosion of teenagers already is overcrowding our high schools; and there's room for too few of their graduates in colleges and universities. Only those with highest academic records can gain admittance to really good universities. Moreover, freshman flunk-out rates are soaring in the colleges. There just isn't room even for those who are admitted.

(The number of personal and family tragedies involved in this situation is almost beyond calculation. Every subscriber can supply his own "ferinstances." And all those with school-age children will be smack up against it eventually.)

(d) Already squeezed-to-the-last-drop-of-blood taxpayers are faced with enormous additional bleedings for new buildings and more teachers.

Yet, none of these disasters need occur. The Trimester Plan is a simple, honest, practical, decent solution. Already it has been tried and found not wanting.

Mr. Subscriber: YOU, too, *can* do something about it. Your fellow members-of-the-club in Michigan and Pennsylvania and California have proved that action can be swift once this simple, unassailable idea is presented and promoted by men like yourselves.

Let's get with it!

REPUBLICAN CITY'S INTERESTING HISTORY PROVIDED BY SUBSCRIBER

Paragon Electric Co.
Two Rivers, Wis.

Editor:

I don't know about those other towns mentioned in your April 24 "Dope," but I can tell you that Republican City, Neb. has a rather interesting history.

This was a sleepy little town on the Banks of the Republican River (population 349). Its only connections with the outside world were a railroad with no passenger service, and State Highway No. 3, whose gravelled surface served as the main street.

Near the end of the 20-year reign of terror, some zealous party hack in the Interior Department decided to remove this blight from the the picture forever, not by changing the name, but by building a flood control dam one mile down river. (Last flood in 1935.)

Dame Fortune smiled, however, and before the cork was put in to stay, Eisenhower was elected; and the entire town, instead of being inundated by 130 feet of frustrated Mississippi mud, was moved house by house and store by store to high ground.

There it sits today, bounded on one side by a newly constructed macadam highway No. 3, on two other sides by prairie dog towns, and on the fourth by a 130 foot deep, 20 mile long fisherman's paradise.

My brother-in-law was superintendent of schools during all this time and wrote a Doctor's Thesis on the sociological aspects of moving a town. Most interesting. But it sure raised h--- with the cat-fishing.

W. A. PETERSEN

DANGERS OF COMMUNISM

Evanston, Illinois

Editor:

I was glad to read your "Outside Dope" column in your May 29 edition. We all need to be alerted to the continuing dangers of world communism.

FRANK MCELROY

IT'S MURDER, SAYS SERVICEMAN

45 Victor Ave.
Cuyahoga Falls, Ohio

Editor:

It's murder what the manufacturer expects the serviceman to do: service valves which won't open without a 24-in. pipe wrench and heat and profanity; air-cooled condensers that need dampers, modulating valves, thermostats, head pressure controls; Phillips screws which need a welding torch to be removed; capacitors, relays, switches in a little box called a *control panel* in the top of a cabinet toward the rear where you can't reach it for service and maintenance.

Some of these companies have been in business for 50 years and employ college graduates; what can you expect from us inept servicemen with only 10 to 20 years' experience?

F. E. MCCORMICK

RUGGED REPORTERS VANISHING?

Huron Steel Co., Inc.
Detroit, Mich.

Editor:

Your column on Honk Kong was delightful but you fell flat on your face as a reporter when you pointed out that it was difficult to find American cigarettes.

Every bar in the city has stacks of them for sale. Believe me, this is disillusionery. I thought you reporter fellows haunted bars, and got your best tips in them. Is the rugged American vanishing in your profession too?

WM. F. DREVANT

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Joe Elliott Takes a Hard Look

After Year In the Industry, Sees Need for Smarter, More United Sales Effort, But Thinks 20%-Per-Year Growth Is Feasible Goal

A LITTLE MORE THAN ONE YEAR AGO, Joseph B. Elliott became president of York Div., Borg-Warner Corp. He had been president of Schick, Inc., and executive vice president in charge of consumer products for RCA Victor Corp.

Recently the NEWS had an opportunity to talk at length with York's president, and the following interview reflects his views of the industry, particularly in terms of its future course and its current problems. He also relates some of these viewpoints to his experience in other industries.

●

What have you found to be the thing or things primarily different about the Air Conditioning and Refrigeration Industry?

Well, I find that the industry has not made the progress which I think it could have or will make. I make this statement based upon the fact that as an industry which is 75 years old or more, it has reached only eight or ten per cent saturation in the economy or potential use of air conditioning. Refrigeration, naturally, has penetrated more deeply in the home and commercial fields.

If you ask me why, I feel that possibly the industry has sold "air conditioning" instead of "conditioned air." We're prone to hang our sales results, whether they be good or bad, strictly upon the weather. There is more to air conditioning than the weather. Advantages of air conditioning, both in the home and industrially, have not been fully capitalized upon.

One has only to realize the cost when a large industrial plant may send several thousand workers home two or three afternoons because of high temperature and high humidity. In many cases these two or three afternoons' loss of production would pay for proper air conditioning of those facilities.

What Are Problems With Field Engineering?

Is the fact that so much applied engineering is required a factor in giving a different character to the industry's distribution set-up and to its selling methods?

Naturally, large industrial installations as well as centralized home air conditioning require considerable amounts of application engineering. I honestly believe that the combination of architects, consulting engineers, contractors, and manufacturers, can do a better job of conditioning the air in the home or plant than has been done to date. Too frequently, price is the governing factor in an installation and I for one have not seen or experienced the best results on any commodity when price alone governed the purchase of it.

Do the channels of distribution seem proper to move the industry's goods in sufficient quantity?

I think the channels of distribution, quantity wise, are sufficient. Quality wise, there is considerable question. There is not enough actual product knowledge available. In too many cases, if the knowledge is available, it is not being used as well as it might be.

Secondly, one of the most important factors in the satisfying of a customer is a good service organization. I believe the record proves that the industry can improve considerably in this regard.

Then you would say that the retaining of the service by the individual installing contractor is a good thing in this industry?

He either should be prepared to do the service or be certain that competent service organizations are authorized. Being a former television man, I am convinced that if it had not been for excellent servicing and installation services available at the inception of commercial television, the industry would not have reached the saturation of approximately 90% of the homes in the short space of less than 10 years.

What can be done to improve public acceptance of the industry's products?

In my opinion an industry is bigger than any one company in it. When one company feels it can solo flight into a dominant position of an industry, without benefit of the rest of the industry, generally such an industry is slower to make progress. If leading producers of air conditioning realize this more fully and cooperated more actively, the entire industry will grow faster.

Certain members of the industry are now experiencing a test program in the Wilmington, Del. area, where model homes are being equipped with air conditioning. Reports received to date indicate that this test is meeting with quite outstanding success. I am sure other areas of the country will follow this pattern.

How much is the seasonal factor in sales a deterrent to orderly growth of sales and profits?

Naturally, the weather has an impulsive affect on the buying of air conditioning. I do know, however, of dozens of dealers who specialize in nothing but air conditioning, and I mean nothing else, who have to keep their stores open and make a profit by selling air conditioning 12 months out of the year. These dealers have proved, over the past several years, that they could do the volume and make a profit which is the main reason for being in business.

Is There a Key To Better Dealer Profits?

Dealers complain about lack of profit in their business. Is it because they are running scared or letting buyers bluff them? Don't they sell well enough to get their price?

I don't think dealers basically

(Continued on next page)

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Joe Elliott Takes a Look--

(Continued from preceding page)

run scared, but too frequently dealers, distributors, and manufacturers take the easy way out. They need the so-called price leader to attract traffic, but in too many cases their sales forces are not sufficiently trained in product knowledge to convince the customer why he should step up to better performance and better appearance and the little extra customer benefits.

The automobile industry does an excellent job of this, so does Sears Roebuck and so do the sports arenas. The National Football League always sells out the highest priced seats before the season starts. In my book, just some good old-fashioned country selling can improve this situation immeasurably.

Too frequently a dealer or a contractor for that matter, in order to get price, will "under capacity" his installation. The automobile industry sells cars that will run 100 miles per hour, yet they are very seldom used for any consistent period of time at that maximum of speed. They perform well in the average speed area and basically hold up to the satisfaction of the customer. Certainly there is no greater asset to any commodity than a group of satisfied customers.

Producers Have Major Role In Selling Public

What can be done to get the dealers to take the story of air conditioning to the public?

Manufacturers have to look at themselves in the mirror. They are the originators of the product and it is up to them to see that the dealers and distributors are properly informed about the product to sell it intelligently to more users.

In this regard, some say one of the troubles in industry is that air conditioning hasn't developed a "status symbol" so to speak. Do you think there is an answer to this?

I'll probably have lots of competitors jumping down my back, but I'll say the industry suffers from lack of leadership and I think the industry has not done sufficient basic research, which I think they'll be forced to do more than they have in the past, through the advent of the thermal electric art.

In my opinion, this could be the big break-through in the air conditioning and refrigeration industry. It just makes sense that when you can reduce the moving parts, or practically eliminate them, you have a more efficient product . . . a product that will require less cubic footage of space, less servicing and, eventually, be more economical from a purchase and maintenance standpoint.

The industry can do considerably more with the home builders as well as with the architect and the contractor. Certainly, the industry members should know more about what its products can do and more about the application of that product than one more remotely concerned with the day to day details of the problem.

In other words, you can do things to help the realtor and the realtor's men to appreciate and push air conditioning, if the industry's own sales people will work with them?

Absolutely, I wouldn't say that a manufacturer or a retailer dominates the situation, but, I repeat, I am a firm believer that a good sound manufacturer leads the retailer and the builder and the contractor or any other purveyor of his product.

Manufacturers spend a lot of money for promotional materials. Is this material being put to the best use in the field?

Manufacturers, as well as retailers, do not get their story across as well as they could. Too frequently, the dominating factor, particularly in a retail ad, is the price.

There is a certain large mail order organization that does one of the outstanding merchandising jobs in the country and the customer buys from a catalog. In other words, the story is sufficiently well told and believeable to make millions of customers buy year-in and year-out from this organization.

Some Trip Money Might Be Better Spent

Some say the air conditioning industry has made greater use of the incentive prize trip than any other industry. Is this true and what are the advantages and disadvantages of such a contest?

The air conditioning industry does not have a monopoly on trips. I think trips have meant a great deal more to the small store operators than they have to the larger retail organizations. I question sometimes the advisability of keeping retailers away from their stores as long as the various manufacturers' trips have done.

We may all be smarter to take some of these funds which have been spent for trips and spend them to properly inform the consuming public about the virtues of our products.

Certain industry opinion holds that a major problem is a failure to recruit new dealers and other new people generally into the air conditioning business. Others say that the field may be overcrowded. What seems to be the real situation?

The field may seem overcrowded because of the lack of penetration or the lack of saturation that the industry has obtained. Generally, the field does not become over competitive until a market has been saturated to approximately 65 to 75%.

I'll be so bold as to say that the air conditioning industry, properly led, will be doing five times its present volume in the next decade. There is hardly a new industrial plant or a new major size apartment building being erected today that does not contain air conditioning.

Important To Recruit Engineering Talent

Do you think anything needs to be done by the industry as a group to entice good engineering talent to enter the industry?

Yes, this is always an asset. As far as our company is concerned, we have doubled our recruiting of engineers in the past 12 months and, as our volume expands, this program will expand accordingly. I will repeat that there must be more basic research in the product field to

"Here's why I standardized on H&M cooling towers

...they're the only towers with a 20-Year Guarantee on the wetted deck surface!

"In my town, most air conditioning and refrigeration buyers prefer cooling towers for their installations. But local water conditions are pretty hard on the fill. Fungus and algae grow fast and furious—so fast that the accumulation actually blocks air flow and cuts tower capacity!

"After trying several makes, I standardized on H&M Cooling Towers. *The wood fill is specially treated with creosote applied under pressure,* and water plants and animals can't live on that! That's why the Halstead & Mitchell towers carry a 20-Year Guarantee on the wetted deck against failure due to fungus attack or rotting."

If you want towers that will last, and need a minimum of care, you should find out about H&M towers. Call your local parts wholesaler or write for Bulletin EC-500 (Propeller Fan Towers, 3 to 150 tons) or Bulletin ECKB-601 (Centrifugal Fan Towers, 5 to 30 tons). Halstead & Mitchell Co., Dept. H-63 Bessemer Building, Pittsburgh 22, Pa.

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SAYS YORK'S PRESIDENT

". . . I have not experienced the best results on any commodity when price alone governs the purchase of it . . . there is not enough product knowledge available . . . an industry is bigger than any one company . . . there must be more basic research . . . sales forces don't convince the customer to step up . . ."

* * *

saturate the market more deeply.

Will the break-through likely to be in the character of product which you touched on, or possibly in its application, such as developing an atmosphere that can be demonstrated to improve health generally?

I think the big break-through or the real volume will come when a completely new approach, such as thermal electric, comes about. I also believe major improvements in volume for the immediate future will come through better application of our product with intelligent effort and integrity in convincing the public that our product is not only for comfort, but also for cleanliness, efficiency, and beneficial to health. We do not hammer away at these basic advantages as we should. If we claim a product will do something then, out of sheer integrity, it must do what we say it should.

20% Growth Rate Seen for 3 Years

How much should we expect the industry to grow say, in the next three years, in terms of percentage of sales and possibly the number of people engaged in the industry? In what area of the market is the largest growth likely?

I believe the industry will grow a minimum of 20% each year for the next three years. The largest dollar volume will naturally come in the industrial field. However, there is considerable evidence of substantial growth in centralized air conditioning for the home as well . . . as through-the-wall application of room air conditioners.

What kind of sales effort of a dramatic type might bring a break-through in the residential air conditioning market?

I honestly don't know of a dramatic approach. I found in my experience in the early days of television that if we got one home in a block to buy a television receiver it wasn't long before the entire block was a major user of the television products. I have heard, in this industry, that more than one family did not know how to get along without air conditioning after they had experienced the benefit of using it for a year.

Objectives: Reduce Noise, Size, Price

Now to get into some specifics about the future course of the York Div. Is there anything you might want to say as to what is likely to come about in any phase of its activity?

Well, we're investing considerable funds in talent and in facilities for the reduction of noise in air conditioners. As is always the case, our products are under continuous study for improvement in performance, for reduction in size and, where humanly possible, for lowering the prices to attract more and more users.

Do you see any conflict or any problem in the bringing together in one organization and in one manufacturing operation such widely divergent items as a room air conditioner and a large centrifugal compressor?

No, I really don't because I think they are so closely allied from an end-use standpoint that there is no major problem here. Your distribution channels may vary but, from a manufacturing standpoint, this situation is compatible.

More Top Executives Needed In Assn. Work

How do you view the industry's association activities, in the light of your experience in other industries?

First, I would say that there is a need for the various associations in the industry to coordinate their activities better. The rating certification programs are a fine thing, but more of this type of activity is needed. I also believe that there should be more participation in association affairs by top management people.

The air conditioning business seems to exert a special fascination both for those who have spent their life in it, and those who enter the industry from other fields. One of the reasons for this is that it still offers what is probably the greatest growth potential in our economy. If all of us do our jobs better and tell the industry's story better, it can speed its growth tremendously—but it's not a one-man or a one-company assignment.

Mueller Brass Names Brandenburg, Moore

PORT HURON, Mich.—Mueller Brass Co.'s appointment of H. Lee Brandenburg as manager of the Defense Products Div., and Sherman W. Moore as manager of Sintered Metal Products Sales has been announced by R. L. Gibbs, general sales manager.

Prior to his recent employment with Mueller Brass, Brandenburg was manager of the Special Products Div. of Gibson Refrigerator Div., Hupp Corp. Moore served eight years as regional sales manager of the Amplex Powder Metal Div. of Chrysler Corp.

NEWS readers are invited to write to the editor giving their opinions on any subject of interest to the industry.

Mr. Louis E. Bake, *Air-Conditioning Dealer,* says:*

"Selling with the A.R.I. Directory is easier, faster, more profitable."

How profitable? Ask Louis Bake, who uses the ARI Directory regularly, finds it a big help in closing sales, and a major factor in his company's 50% sales increase in 1960.

"When I show customers that the unitary system I'm recommending is listed in the ARI Directory, and *certified* under the program of this national association, I add authority to my presentation.

"I point out how the equipment is carefully rated under the Certification Standards, that this rating is subject to checking at any time by the Institute through an independent testing laboratory in New York. Result: I back my sales talk with the authority of the Air-Conditioning & Refrigeration Institute, give my prospects more confidence in what I say.

"I thought selling with the ARI Directory couldn't be beat—until I saw the new ARI Consumer sales piece, 'How to Buy Central Air Conditioning.' This is a *must* for any dealer who wants to tell his prospects the *how* and *why* of central air conditioning. It tells the full, technical story in words John Q. Public can understand, and helps any honest dealer sell a quality system."

Free copies of both the A.R.I. Directory and "How to Buy Central Air Conditioning" are available from:

AIR-CONDITIONING & REFRIGERATION INSTITUTE

Department A-611, 1346 Connecticut Avenue, N.W., Washington 6, D. C.

*Mr. LOUIS E. BAKE is Sales Manager of Cool-Heat Sales Company, Inc. of Washington, D. C.

Mueller Makes Boilers Easier To Handle

● The production of a family of compact, packaged (Type 15) and semi-assembled (Type 14) boilers which range in inputs from 60,000 to 270,000 Btuh has been announced by Mueller Climatrol, division of Worthington Corp., Dept. AH&RN, 2005 W. Oklahoma Ave., Milwaukee 1, Wis.

"Ease of shipment, handling, and erection are important features of the new lines," the company said. "Even non-packaged units have cast-iron sections assembled, mounted on a steel base, and flue collector attached. Top outlet connections reduce piping length and eliminate an elbow and a nipple."

Type 14 semi-assembled boilers have one dimension which does not exceed 14 in.—"for clearance through the narrowest of passageways."

These new boilers are shipped without circulators—and if they are added in the field—they can be placed anywhere in the system. The company said Type 14 boilers "can give a dealer a wide flexibility of installations without large inventories of units. You can stock a block of sections and jackets and sell a gravity hot-water, forced hot water, or steam heating unit."

Type 15 packaged boilers are available in four assemblies: without circulator or tankless heater, with tankless heater and no circulator, with circulator and no tankless heater, with both circulator and tankless heater.

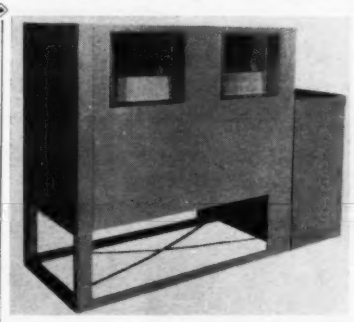
Baseboard Radiation In 3-Ft Lengths

● The addition of a 3-ft length to its line of baseboard radiation products has been announced by John J. Nesbitt, Inc., Dept. AH&RN, State Rd. & Shawn St., Philadelphia 36, Pa.

"The new Three Foot Enclosure and Element along with the standard line of 4, 5, 6, and 8-ft lengths will provide contractors with even greater flexibility and eliminates any cutting on the job site," the company stated.

Features incorporated in the new length include dove gray semigloss finish which blends with most room decors but which can be refinished in special colors on the job site; tamperproof front panel; and special design features which prevent wall streaking, according to the company.

Remote Heat Pump In 7½, 10 Hp. Models

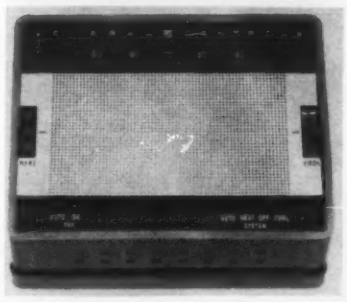


● Commercial remote air-to-air heat pumps in 7½ and 10-hp models have been announced by Heat Controller, Inc., Dept. AH&RN, Losey at Wellworth, Jackson, Mich.

The outdoor section includes a compressor, receiver, electrical control box, four-way reversing valve, condenser coil, and centrifugal fans. The indoor section includes fan and drive, large surface cooling-heating coil, and filters. Supplemental heat is available as optional equipment.

Either or both the condensing unit and the compressor section can be remotely installed, giving flexibility in equipment location, the company indicated. Other features of the "rugged, heavy-duty" units include low head operation, pump down control, and low silhouette design, it was stated.

Room Thermostats Have 'Subtle Touch'



● A line of "Subtle Touch" room thermostats has been introduced by General Controls Co., Dept. AH&RN, 801 Allen Ave., Glendale 1, Calif.

"Designers met the challenge of combining dependability with all-purpose styling by housing mercury switch mechanisms in sculptured, clean-cut coverings," the company said. "Suitability to all interiors is achieved by using hues of buff or gray for the coverings which also feature quiet touches of gold. Additional subtlety is provided by its thin, wall hugging casing."

General Controls is offering the Subtle Touch in a trio of models. For heat control only is the "T-99."

The "T-91" is a single-dial summer-winter air conditioning thermostat which controls both heating and cooling systems, and the "T-344" is the master control center featuring automatic switchover heating and cooling controls.

Evans Adds Beverage Display Refrigerator

● A new line of refrigerated long door display cases for beverages, wines, and liquors is offered by Evans Mfg. Corp., Dept. AH&RN, 30 Haven Ave., Mount Vernon, N. Y.

Featured are large, full vision "Thermopane" glass doors with stainless steel frames. The cases are constructed of heavy gauge all welded steel, with rigid glass fiber insulation sealed against moisture infiltration. Deep, heavy duty wire shelves can be adjusted to suit individual requirements. Fluorescent lighting floodlights display.

All models are self contained, ready to plug in and use with Evans' balanced "Even Aire" refrigeration system, according to the company.

The refrigerators are available in 54, 72, and 96-in. lengths, in finishes of all white, all stainless steel, or colors to match store decor.

Small Blower Wheel Line Added by Lau

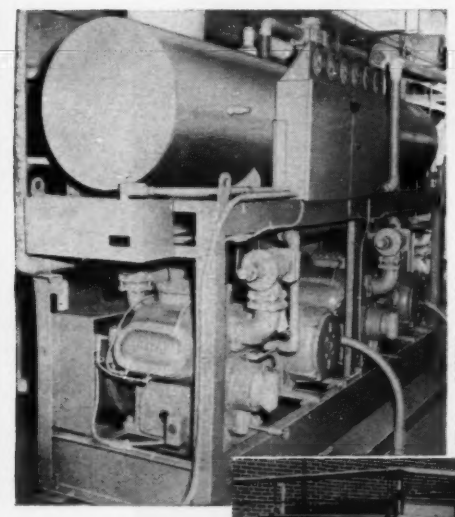
● A new line of small blower wheels specifically designed for use in various types of home appliances has been developed by The Lau Blower Co., Dept. AH&RN, 2027 Home Ave., Dayton 7, Ohio.

The new wheels are designed for air moving in oil burners, fan coil units, window air conditioners, space heaters, wall furnaces, kitchen ventilators, and automobile heating and air conditioning systems.

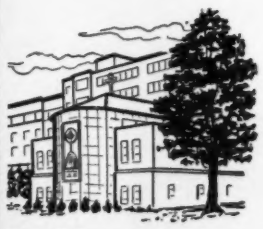
In four diameters and 12 blade lengths, the new line represents the smallest blower wheels yet produced by the company. Diameters are 4¾ in., 6 in., 7 7/16 in., and 8½ in.

Blade lengths range from 2 to 4¾ in. in ¼-in. increments.

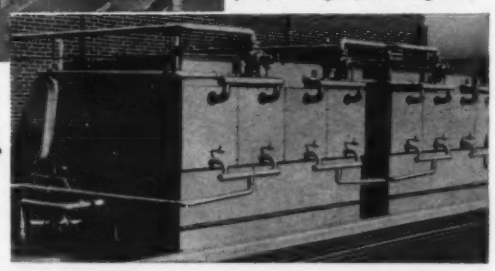
With Vilter air conditioning . . . it's almost a pleasure to be a patient here



View of the two Vilter packaged water chilling units arranged as four independent refrigeration systems. Two Vilter VMC compressors are included in each chiller unit.



New addition to St. Mary's Hospital, Huntington, West Virginia.



View of the two Vilter evaporative condensers, one for each packaged unit. Each condenser is divided into two separate sections to efficiently reduce capacity when required.

Efficient, flexible, quiet—the Vilter installation for the new addition at St. Mary's Hospital provides everything a hospital requires of an air conditioning system.

This system is designed around two separate Vilter Refrigerant 22 packaged water chilling units arranged as four independent systems supplying a total of 300 tons of refrigeration.

The performance advantages are — (a) an exceptionally flexible operating plant because of the four systems and the 33% and 66% capacity modulation built into each compressor; (b) lower starting and operating noise levels as a result of dividing the full load and using modern slow speed equipment; (c) maximum insurance against failure; (d) ease of servicing.

Four Vilter VMC compressors, V-belt driven from 75 H.P. motors, individually develop 76 tons as each water chiller cools 440 gpm from 53° F. to 45° F. with a 35° F. refrigerant temperature. Two Vilter evaporative condensers are utilized with each condenser divided by a baffle to actually provide four separate 100-ton units.

You benefit doubly with Vilter refrigeration and air conditioning equipment—(1) careful design for long life and reliable, efficient performance; (2) a complete and integrated line of equipment, and the experience to counsel you on the best type of installation. Why not let the nearest Vilter representative help you?

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Dryomatic CORPORATION
ALEXANDRIA, VIRGINIA

Machine Makes, Stores, Vends Ice Cubes

● A new, fully-automatic ice cube vending machine, the "Ice Mart," has been introduced by North American Vending Mfg. Corp., Dept. AH&RN, 110 Jericho Turnpike, Floral Park, L. I., N. Y.

Designed for trafficked areas such as gas stations, shopping centers, and supermarkets, the compact Ice Mart makes its own ice cubes automatically, stores them automatically, and vends them automatically.

The machine can be operated indoors as well as outdoors and will fit through any standard size door, it was stated. Capacity is listed as 400 lbs of ice cubes per day.

"Operation is simple," the company said. "The buyer inserts his coins which release a bag from a specially-designed automatic bag dispenser which holds 300 polyethylene bags. He places the bag under the ice chute and presses a button which fills the bag automatically with 1¼-in. by 1¼-in. by 1¼-in. sanitary ice cubes. The coin acceptance device is a reset unit."

Price: $3,995.

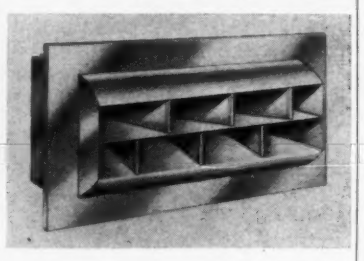
Put Phenolic Housing On Humidifiers

● A new, jet-black, molded Phenolic housing has given a new look and important advantages to the model 110 and model 112 "Aprilaire" furnace-mounted humidifiers, according to the manufacturer, Research Products Corp., Dept. AH&RN, Madison 1, Wis.

"There is no possibility of water damage," the company reported, "because the high grade Phenolic plastic used is impervious to water; rust and corrosion proof. It will withstand high temperatures and is exceptionally durable.

"Accompanying design changes have further simplified installation and maintenance. The new models are lighter in weight, smaller in depth, and are quickly and easily mounted on the plenum by a new procedure utilizing five convenient clips."

Diffuser Equipped With Rotary Cylinder

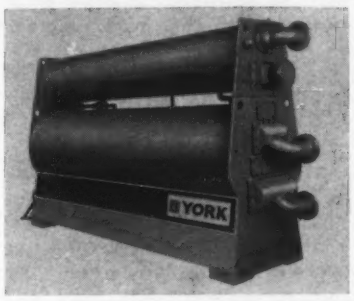


● Air Devices, Inc., Dept. AH&RN, 185 Madison Ave., New York 16, N. Y., has announced a series of extruded aluminum, cylinder type "Roto-Jet" diffusers for heating and cooling applications in any large interior where long projection of air or modulated diffusion is required.

The design incorporates a rotary cylinder and split diffusing vanes. The cylinder can be adjusted for upward or downward or straight out projection. The split diffusing vanes can be adjusted for air direction blows—left or right or for modulated diffusion.

Roto-Jet diffusers can be installed either in a horizontal or vertical position.

York Absorption System Improved



● 1961 water chilling absorption systems from the York Div. of Borg-Warner Corp., Dept. AH&RN, York, Pa., offer a number of improvements over previous lines, York announced.

The model EK comes in 20 capacities ranging from 50 to 1,000 tons of cooling for air conditioning and process applications.

Among features of the line, the company said, are flexibility of application and low installation cost.

CompacTowers Save Space, Weight, Time

● A new line of water cooling towers has been introduced by The Marley Co., Dept. AH&RN, 222 W. Gregory Blvd., Kansas City 14, Mo. Trade-named "CompacTowers," this line covers a capacity range upward from 100 tons, nominal.

The company said the CompacTower saves space, weight, and time. Application of modern materials and utilization of broad design experience have enabled Marley engineers to produce a tower with high-level cooling performance per cubic foot of tower structure, it was indicated.

"Curtain-wall" casing, honeycomb segments in filling, air intake and air discharge areas, plus advanced design cold water basin minimize operating weight.

"Erection is fast," it was stated. "Towers ship in two easy-to-join sub-assemblies. All models are modular units with uniform height and width dimensions permitting easy multi-cell installations. Simplified wiring and piping further

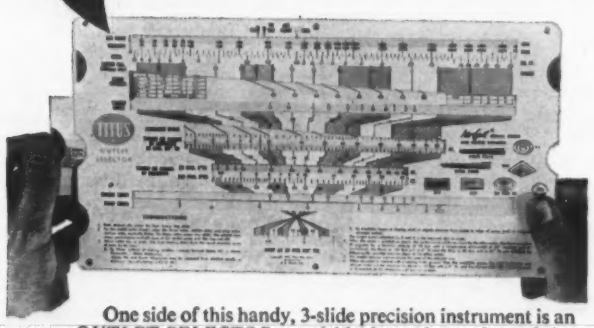
reduces installation time. All internal areas are readily accessible for inspection and maintenance through conveniently located access panels."

CompacTowers are also available in all-metal, completely fireproof models.

More details on the products described on these pages may be obtained by writing the manufacturer at the address given in each story.

NEW TITUS SLIDE RULE

Combination Outlet Selector & Air Flow Calculator for ENGINEERS & CONTRACTORS



One side of this handy, 3-slide precision instrument is an *OUTLET SELECTOR* to quickly determine outlet and size based on available space and noise criteria. Other side of rule is *FLOW CALCULATOR* to determine air flow rate for any diffuser or grille from velocity measurements in the field.

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TECH CENTER

by FRANK J. VERSAGI

Mylar & Alcohol: a Summing Up

Because of its importance and timeliness, this summary on the alcohol-"Mylar" dispute is presented today. The interrupted discussion of Heating, Air Conditioning, and Refrigeration in Supermarkets will resume next week.

Next Tuesday, June 27, a paper on the degradation of "Mylar" polyester film by alcohols will be read before the 68th annual meeting of ASHRAE, in Denver. The important conclusion to be presented is that no anti-freeze compound of any type is recommended for use in a hermetic refrigeration system containing acrylic-polyester insulation.

The April 3 issue of the NEWS carried a report of a service managers' club meeting in which it was suggested that methanol, the usual anti-freeze alcohol used in refrigeration, will "dissolve Mylar," and it was recommended that RSES issue warnings to its members against adding alcohol to a system which they know to contain the new insulation material.

In the May 29 issue of the NEWS, General Electric spokesmen pointed out that it is inaccurate to say that alcohol *dissolves* the Mylar, although they acknowledged that there is an undesirable reaction between alcohol and the plastic insulation which can lead to embrittlement of the Mylar film.

Du Pont, whose patented material Mylar polyester film is, told the NEWS that the gradual embrittlement of the film caused by alcohol at the operating temperatures of a hermetic system will "negate the benefits which may be otherwise derived from the new insulation systems in these hermetic motors."

G-E and du Pont Scientists Interviewed

Because of the importance of this subject to manufacturers of compressors, condensing units, and anti-freeze compounds, and to contractors and servicemen, the NEWS arranged interviews with scientists and engineers from General Electric and du Pont and surveyed all available technical literature on the subject. At a later date, the full story of the impact of Mylar will be reported; for now, we will limit the discussion to the alcohol-Mylar problem.

Keep in mind that Mylar has been used in open-type motors for five years or so; the longest known life on a hermetic system is about three years. While Mylar film costs more per unit area than its cellulosic competition, the total installed cost of Mylar is less because of greater ease in handling during the manufacturing and assembling processes.

When we consider hermetic refrigeration, the greatest advantage of the polyester insulation is that under no conditions does it *add* water to the system. It is a well known fact that cellulosic insulation when heated tends to break down and liberate water into the unit. Further, when a burnout occurs for any reason, the motor is much cleaner when insulated with Mylar than with cellulosic materials.

As Mylar ages, it tends to become brittle, but experience has indicated that even after embrittlement, it still possesses 90% of its superior electrical characteristics and most of its physical properties. The point is that mere embrittlement will not cause it to fail in normal service.

So what's the problem?

Alcohol and Water Affect Mylar Most

The problem is that of the very few materials which will affect the composition of Mylar, water and alcohol are among the worst. Water tends to depolymerize the material; hydrolysis can be such a problem that Mylar is never recommended where is will be exposed to steam or water in critical areas. In fact, early sealed tube tests with moisture indicated that the new insulation would be impractical for motor insulation; at the same time, however, field tests—with actual motors—were showing that the material has superior qualities for such uses. It was found that the sealed tube tests did not realistically reproduce the weight-and-volume ratio of the several materials found in motors.

These same sealed tube tests, conducted by two or three companies, led to contradictory conclusions about the effect of alcohol on Mylar. Word went out that the two materials were compatible, and that there was no objection to using alcohol in systems containing Mylar. There were a couple experimental errors involved in the techniques used for the first testing, errors which came to light after further tests and field experience showed clearly that there was something going on between alcohol and Mylar.

In effect, alcoholysis has the same effect as hydrolysis, but alcoholysis proceeds at a more rapid rate. By breaking down the long chemical chains which go to make up the polyester (Chemical name: polyethylene terphthalate), the alcohol causes the insulation to become brittle. If this embrittlement proceeds long enough, it is possible for the material to crack or rupture at sharp folds or where it is in contact with a keen metal edge.

Evidence Is Impressive But Not Fully Conclusive

While the evidence for all this is impressive, it's not overwhelmingly convincing, as it would have to be to make some people change their procedures. Thus, two major manufacturers still insist on adding alcohol to their units. "We are aware of all that has been said and experienced: we'll keep our eyes on what we're doing," is their consensus.

Contractors, faced with a tremendously wet system, still rely on alcohol to get them out of trouble. Later they will install a drier and hope to remove most of the alcohol by adsorbing it on the desiccant. "For one thing, we can't know when a unit has Mylar insulation; for another, the methanol won't be in that long when we use it just to trouble-shoot."

Producers of internal leak detectors and liquid dehydrants comment that they have yet to receive valid field data indicating that such additions actually harmed a system in any way. "A lot of opinion, no substantiating data," is the way one put it.

The tests run by Bell Laboratories, du Pont, and General Electric seem to indicate that no anti-freeze compounds are suitable for use with Mylar. While there is some contradictory data on the results obtained with normal-butyl alcohol, the conclusions of G-E's Claus J. Bushouse seem to reflect the general feeling: "Studies . . . indicated that methanol and four other primary alcohols have the same order of reactivity; that two secondary alcohols were about equal to water in reactivity."

The controversy is not as definitively settled as some would have it, but the people who make the Mylar insulation and the majority of the people who use the polyester insulation in hermetic systems agree that alcohol should not be added to a refrigeration cycle, either at the plant or in the field.

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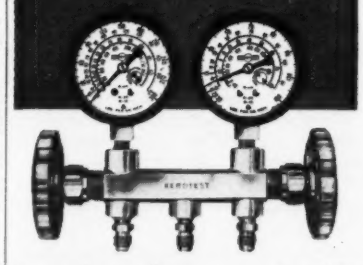

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New Spangle-Free Zinc Coated Steel Has Improved Paint and Weld Characteristics

MIDDLETOWN, Ohio—A new spangle-free, hot-dipped zinc-coated steel, developed specifically to improve paintability characteristics of current paintable galvanized steels, has been announced by Armco Steel Corp.

The spot welding properties of the new material also are superior to those of paintable standard zinc-coated steels, according to Armco.

The new material, designated "Zincgrip A, Paintgrip," is chemically treated for "maximum paintability." It is the first spangle-free, hot-dipped zinc-coated steel chemically treated for painting that carries a 1.25 oz class zinc coating as specified by ASTM A-93, claims T. F. Olt, vice president, research, and technology, Armco Steel. The new sheet is also produced in light commercial coating weight.

"Zincgrip A, Paintgrip is expected to challenge paintable zinc-coated sheets that now meet stringent painting requirements by utilizing a lighter coating of zinc," Olt said. "It is also expected to compete with cold-rolled steel treated for painting and with aluminum in certain applications.

"For applications not requiring maximum paintability, the special chemical coating can be eliminated. The untreated sheet, designated Zincgrip A, is also spangle-free. Its paintability, particularly in terms of paint life, is less than that of Zincgrip A, Paintgrip."

Regarding welding, the announcement stated: "The fact that more than twice as many resistance spot welds can be made on Zincgrip A, Paintgrip than on regular galvanized sheets is particularly significant. Zinc-coated steels historically have been difficult to resistance spot weld. For this reason, many manufacturers have avoided using the material."

NEWS readers are invited to write to the editor giving their opinions on any subject of interest to the industry.

A THREE-YEAR outdoor corrosion comparison test in a mild industrial atmosphere was made by Armco Steel Corp. The top two panels are Armco Zincgrip A, Paintgrip, painted and unpainted. The bottom two panels are painted and unpainted cold-rolled steel phosphate-treated for painting. The paint system used for the two painted samples was the same. The painted Zincgrip A, Paintgrip panel shows no indication of rust in the scribe marks and its general condition is excellent after three years. The cold-rolled panel shows definite signs of rust in the scribe marks. Corrosion has started to undercut the surrounding paint as shown by the fuzzy area bordering the scribe marks. The paint will eventually lift and flake off. Unpainted Zincgrip A, Paintgrip exhibits no sign of red rust after three years while the unpainted surface of phosphate-treated cold-rolled steel has completely rusted.

Zincgrip A, Paintgrip can be drawn, formed and lock seamed to the limit of the base metal without flaking or peeling of the coating, it is claimed. The Armco process used to produce Zincgrip A, Paintgrip is said to result in a product with a consistently ductile coating.

Zincgrip A, Paintgrip with 1.25 ounce class coating is available in coils and cut lengths in gauges 16 through 24 and width up to 36 or 48 in. depending upon gauge. Further developmental work on producing the material in thicknesses and widths beyond this range is currently in progress.

The new sheet was developed "to meet maximum paintability requirements while offering excellent corrosion resistance." Applications are expected in the heating and air conditioning and appliance markets among others.

Computer Evaluates New Controls

MINUTES EQUALS MONTHS on this new analog computer used by Minneapolis-Honeywell temperature control engineers to duplicate climate and building conditions anywhere in the world. The computer enables Donald Nelson, Honeywell research engineer, to obtain in 15 mins. technical data that would otherwise take years to assemble. Computer inputs simulate outdoor temperatures, wind direction and velocity, diurnal solar variations, latitude, and whether the sun is shining or covered by clouds. Information fed into computer includes building size, type of construction, glass area, insulation, air conditioning requirements, piping, and ductwork. Results are used to evaluate performance capabilities of new temperature controls.

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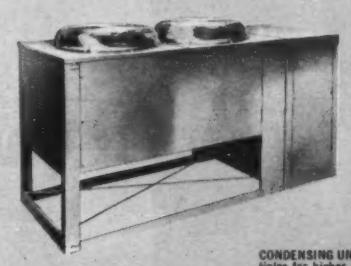
FREE PARKING AND FAST COUNTER SERVICE AT THESE 4 BIG WAREHOUSES

12 YEARS and over a MILLION UNITS

That's the experience behind Addison's Commercial Line. Since 1949 our facilities have expanded each year to where we now have more than 200,000 square feet of manufacturing area. Addison's know how, experience and fully equipped plants are your assurance of quality products.

ADDISON AIR CONDITIONERS



CONDENSING UNITS—7½ to 20 h.p., multiples for higher ratings • Rugged • Quiet • Weatherproofed • Diagonal coil for minimum plan area • Controls wired and enclosed • Compressor section may be detached • Designed for outdoors.

HORIZONTAL AIR HANDLERS—Sizes to match Condensing Units • For remote installation with ducts or with plenum and 4-way grille as optional extra • Large coil face area for low air velocity and sound level.

THERE'S REAL PROFIT FOR YOU BECAUSE: Addison Commercial Units are between the highly competitive residential market and the big, complex industrial installations. Easy to install • Flexible to meet any conditions—multiples for higher ratings • Quality features to sell customers and keep them sold • Durable, trouble free construction • A price structure that will get business for you, and at a profit.

ALSO: HEAT PUMPS • WATER CHILLERS • ROOF TOP UNITS

MANUFACTURERS REPRESENTATIVES
Some territories still open. Write or call Commercial Division for details.

ADDISON
PRODUCTS COMPANY
101 RAILROAD STREET
ADDISON, MICHIGAN • PHONE LI 7-1200

Roof-Mounted Units Make Plant Cooling Possible In Akron

AKRON, Ohio—Two Dunham-Bush 7½-hp "RMC" roof mounted conditioners solved a space problem and made air conditioning possible at the Adamson-United factory here, according to Dunham-Bush, Inc.

"This installation has the novel application of two units mounted face-to-face," it was also pointed out. "Flexibility of design made it possible to locate air-cooled condensers in a manner so as to permit air movement for condensing without ducts or noise."

In addition to the space problem, Adamson-United required air conditioning for engineering offices in an existing portion of the building as well as in a new extension to the engineering offices. Since these two areas have different load characteristics, the dual "RMC" units make zoning possible, it was stated.

Consulting engineer for this installation was Byron D. Lind, Akron; contractor–Forbs, Stanford Plumbing & Heating Co.

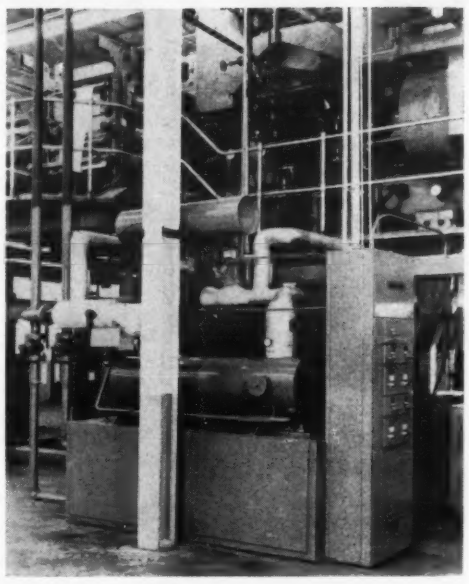
Trane Sales, Profits Up

LA CROSSE, Wis.—Increases in consolidated sales and profits for the first quarter of 1961 compared to the first quarter of 1960 were reported by The Trane Co.

For the three months ending March 31, sales were $23,635,220 with a net profit of $1,317,780, the company reported. This compares to 1960 first-quarter sales of $19,622,450, and profits of $802,769.

Net earnings per share for the first quarter of this year were 49 cents compared with 30 cents for the same '60 period.

30-Ton Chiller Solves Press Problems



INSTALLATION of a 30-ton Chrysler Airtemp chiller provides a stable, year-round air conditioning system for a Goss Unimag Press and 13 press rollers at the Wesleyan University Press, Inc., Columbus, Ohio. The air conditioning system was installed after a well ran dry and city water proved too costly.

Bad Water Condition Forces Publisher To Abandon Well Water

COLUMBUS, Ohio—Business firms purchase air conditioning equipment for a variety of reasons—including bad wells, according to Airtemp Div., Chrysler Corp.

Wesleyan University Press, Inc. here is publisher of "My Weekly Reader" and other multi-color books and pamphlets for school children and teachers throughout the United States.

A Goss Unimag Press prints up to 32 pages in four colors and an Offen Dryer dries the ink. Thirteen press rollers, a 200-hp dynamatic clutch, an electric eye, and ink conditioner all require varying amounts of cooling.

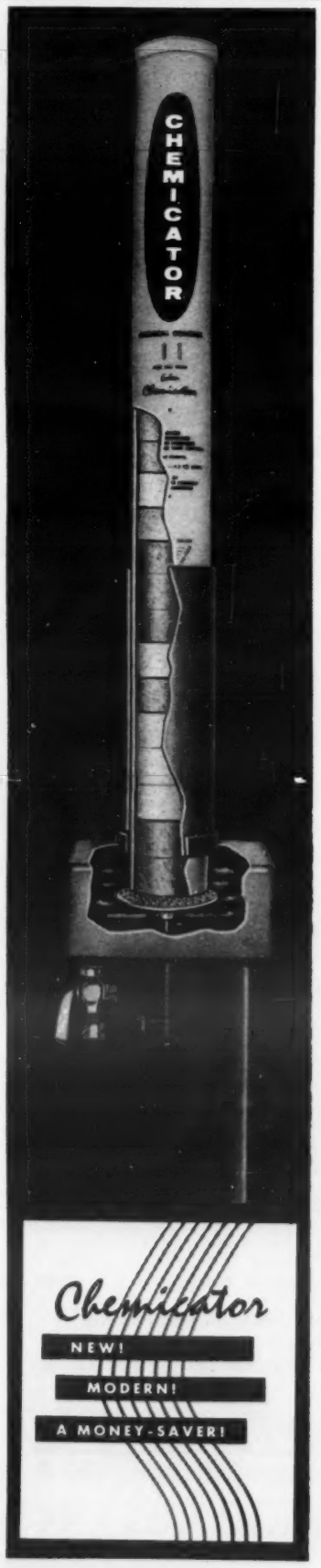
For several years the press and accessories were cooled with well water until a bad water condition forced Wesleyan to abandon their wells and pipe city water to the units.

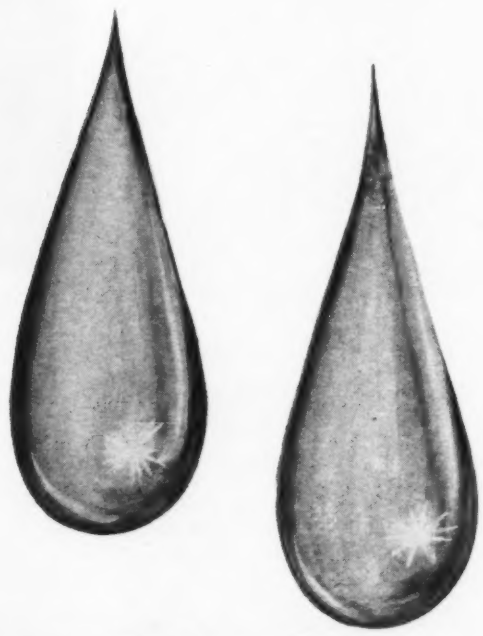
However, the high cost of city water led Wesleyan officials to explore the feasibility of mechanical refrigeration and decide on a 30-ton Chrysler water chiller.

Bogen, Inc., the Chrysler distributor here, and consulting engineer William P. Mitchell recommended a 120-ton cooling tower and 1,200-gal. inside sump tank in completing the design of the over-all year-round system.

The 30-ton packaged chiller delivers controlled temperature water to four critical rollers and the ink conditioner. The rollers properly set the ink and the Sterling Conditioner maintains the ink at the proper temperature and viscosity. Cooling is also provided for the bearings on the rollers in the oven.

The chiller system is providing controlled temperatures for all components of the Goss Press and saving Wesleyan University Press approximately $8,800 a year in operational costs, it was stated.

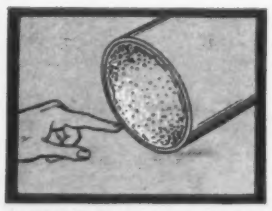




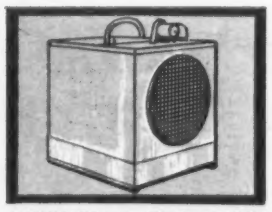
They may look alike...

Chemically treated water and natural water may appear alike. But scale, algae, or corrosion in your cooling system means that sooner or later, on a hot summer day, breakdown and expensive overhaul or replacement is almost inevitable.

Chemicator assures positive chemical control of recirculating water in cooling towers and evaporative condensers whether your unit is 5 or 300 tons.



CHEMICATOR keeps scale forming deposits in solution to prevent scale.



CHEMICATOR positively inhibits the corrosive qualities of water.

CHEMICATOR kills algae and fungus growths, preventing slime and deterioration.

CHEMICATOR is simple in design—inexpensive to install and operate—ready to perform a life-time of trouble-free service. *Distributed locally in many areas.*

**Write for 12-page illustrated brochure.*

Chemicator

CHEMICATOR DIVISION - ERLEN PRODUCTS CO.

700 SO. FLOWER STREET, BURBANK, CALIF.

MIGHTY MITE PROTECTS MOTORS Against OVERLOADS OVER VOLTAGE UNDER VOLTAGE

MIGHTY MITE MOTOR PROTECTORS

MECHANICAL INDUSTRIES PRODUCTION CO.
223 Ash Street Akron, Ohio
SAA 3335/848

For Your Reprint Copy

"Short, Short Course in Air Conditioning Fundamentals." By D. C. Schaffer. Mail this ad with your name and address to: Air Conditioning, Heating & Refrigeration News, 450 W. Fort, Detroit 26, Mich.

Only 25¢ each.

Shutdowns Starting July 17 or Earlier

Company	Shutdown Period Plant	Office	Shipments From Plant
Bally Case & Cooler, Inc. Bally, Pa.	7/1 -7/9	7/1 -7/9	Regular
Hart & Cooley Mfg. Co., Holland, Mich.	7/7 -7/16	Open	Emergency
Janitrol Heating & Air Conditioning Div., Midland-Ross Corp., Columbus, Ohio.	7/8 -7/23	7/8 -7/23	Emergency
Kold-Hold Div., Tranter Mfg., Inc., Lansing, Mich.	7/14-7/30	Skeleton	Emergency
Robertshaw-Fulton Controls Co., Knoxville, Tenn.	7/14-7/30	7/14-7/30	
Tuttle & Bailey, Div. of Allied Thermal Corp., New Britain, Conn.	7/14-7/30	Skeleton	None
Wiremold Co., Air Duct Div., Hartford, Conn.	7/14-7/30	Open	Emergency
Geauga Industries Co., Middlefield, Ohio.	7/15-7/30	7/15-7/30	Emergency
General Electric Co., Capacitor Dept., Ft. Edward, N. Y.	7/15-7/30	7/15-7/30	Emergency, Stock Only
R-B-M Controls Div., Essex Wire Corp., Logansport, Ind.	7/15-7/30	7/15-7/30	None
Tuthill Pump Co., Chicago.	7/15-7/30	7/15-7/30	Emergency, Stock Only
Frick Co., Waynesboro, Pa.	7/16-7/23	7/16-7/23	Emergency
Marsh Instrument Co., Skokie, Ill.	7/16-7/30	7/16-7/30	Emergency
Auer Register Co., Cleveland	7/17-7/30	Open*	Stock Only
	*For telephone calls only.		
Barnebey-Cheney Co., Columbus, Ohio.	7/17-7/30	7/17-7/30	Emergency
Holderle Bros., Inc., Rochester, N. Y.	7/17-7/30	7/17-7/30	Emergency
Industrial Acoustics Co., Inc., New York City.	7/24-8/4	7/17-7/28	Stock Only
Kerotest Mfg. Co., Pittsburgh.	7/17-7/30	7/17-7/30	Regular
Mueller Climatrol Div., Worthington Corp., Milwaukee.	7/17-7/23	Open	Emergency, Stock Only
Perfection Div., Hupp Corp., Cleveland.	7/17-7/30	7/17-7/30	Emergency
Powers Regulator Co., Skokie, Ill.	7/17-7/30	Open	Stock Only
Westinghouse Electric Corp., Industrial Motor Dept. Lima, Ohio.	7/17-7/30	7/17-7/30	Emergency, Stock Only
Wilcolator Co., Elizabeth, N. J.	7/17-8/6	7/17-7/30	

Plant Vacation Schedule

These Plants Are Staying Open

The following plants have informed the NEWS that they follow staggered vacation schedules or have no plans for closing at any time during the summer. Companies marked with * will close for vacation or inventory in the fall or winter. Dates will be given later.

(Continued)

Fraser & Johnston Co., San Francisco.
Jabsco Pump Co., Costa Mesa, Calif.
Refrigerating Specialties Co., Chicago.
Research Products Corp., Madison, Wis.
Reynolds Metals Co., Richmond.
Rigibilt, Inc., Franklin Park, Ill.
Rollaire Co., Ft. Lauderdale.
Rotary Seal Div., Sparta, Mich.
Schnacke, Inc., Evansville, Ind.
***Sealed Units, Inc.,** St. Petersburg.
Sherer-Gillett Co., Marshall, Mich.
Silco Products, Inc., Fountain Inn, S. C.
Slant/Fin Radiator Corp., Richmond Hill, N. Y.
Solar Systems, Inc., North Hollywood, Calif.
Southwest Mfg. Co., Aurora, Mo.
Sporlan Valve Co., St. Louis.
Sprague Electric Co., North Adams, Mass.
Star Cooler Corp., St. Louis.
Stoddard Industries, Inc., Cudahy, Wis.
Halsey W. Taylor Co., Warren, Ohio.
Temprite Products Corp., Birmingham, Mich.
Tempromatic Corp., DeLand, Fla.
Titus Mfg. Corp., Waterloo, Iowa.
TOT Towers Co., Houston, Texas.
Trane Co., La Crosse, Wis.
***Tyler Refrigeration Corp.,** Niles, Mich.
United States Air Conditioning Corp., Delaware, Ohio.
United States Register Co., Battle Creek.
Universal Dynamics Corp., Arlington, Va.
Utility Refrigeration Co., Los Angeles.
Vibration Mountings, Inc., Corona, N. Y.
Viking Mfg. Corp., Cleveland.
Vogt Machine, Louisville, Ky.
Wagner Tool & Supply Corp., Hialeah, Fla.
Waterloo Register Co., Cedar Falls, Iowa.
***Weber Showcase & Fixture Co.,** Los Angeles.
Welbilt Air Conditioning & Heating Corp., Farmingdale, N. J.
Western Supply Co., Mfg. Div., Hutchinson, Kan.
White-Rodgers Co., St. Louis.
Wholesale Hermetic Compressor Exchange, Inc., Wausau, Wis.
Witco Chemical Co., Pioneer Products Div., New York City.
A. H. Witt Co., Inc., Los Angeles.
Wolverine Tube Co., Decatur, Ala.; Inkster, Mich.
York-Shipley, Inc., York, Pa.
Yuba-Aimco Div., Aimco Products Corp., Tulsa, Okla.

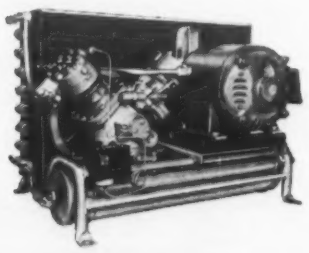
NEWS readers are invited to write to the editor giving their opinions on any subject of interest to the industry.

SUPERMARKET OWNERS GIVE FOUR REASONS FOR CHOOSING OPEN TYPE COMPRESSORS

In the first part of a study recently published by *Air Conditioning, Heating & Refrigeration News*, a 107-store supermarket chain revealed these reasons for preferring open type equipment:

- Much longer life
- Closer balance between high and low sides, with more satisfactory operating conditions
- More universal applicability—wide range of capacities; compressor displacement adaptable to new load conditions
- Unsurpassed service history according to actual records

FOUR REASONS WHY SUPERMARKET OWNERS CHOOSE LEHIGH OPEN TYPE EQUIPMENT



- LOW COST
- IMMEDIATE DELIVERY
- LONG-TERM DEPENDABILITY
- CONTINUOUS SERVICE

LEHIGH BLU-COLD COMPRESSORS AND CONDENSING UNITS
¼ H.P. to 7½ H.P. ■ AIR—AIR-WATER—WATER

Lehigh BLU-COLD

LEHIGH

LEHIGH MANUFACTURING COMPANY,
Division of Lehigh, Inc., Easton, Pa.
Manufacturers of Hermetic and Open Type Condensing Units; Compressors; Receivers; Condenser Receivers.

ENGINEERED BY EDWARDS

AIRVEC

The completely silent Air Cooled Condenser
Never needs cleaning

WRITE FOR BULLETIN AV-4

WRITE FOR BULLETIN TT-653

WATER COOLED **COAXIAL CONDENSERS**

Domestic and sea water models

Reduce costs 40% . . . Reduce condenser water 35% . . . Reduce refrigerant charge . . . Stabilize capillary performance . . . Compact shapes.

MOTORIZED VALVES

For chilled water cooling systems and for heating systems . . . 100% positive shut-off . . . Compact . . . Low cost . . . Low Voltage . . . No current draw when open.

WRITE FOR BULLETIN MV-1

EDWARDS ENGINEERING CORP.
938-29 Alexander Ave., Pompton Plains, N. J.
TEmple 5-2808

"One of the nation's largest manufacturers of Residential and Commercial Boilers, Baseboard and Steel-Fin Radiation, Motorized Valves, Air and Water-Cooled Refrigerant Condensers."

NO GREATER PROFITS IN THE ENTIRE HISTORY OF VENDING!

BIG MONEY in ICE!

AVERAGE BAG SELLS for **60¢**

YOUR COST **8¢**
(incl. bag, water & electricity)

YOUR PROFIT **52¢**

ICE TOWER
AUTOMATIC ICE CUBE VENDING MACHINE

It's Fully Automatic!

- It makes its own cubes — automatically!
- It stores them — automatically!
- It vends them — automatically!

You don't buy ice! You don't load ice!
You don't fill bags! You don't handle ice!
ICE TOWER DOES IT ALL — automatically!

NOW — It's not necessary to be an ice manufacturer to get into the booming ice vending business! Over $350,000,000 worth of ice was sold last year — double the gross of only a few years ago! And now — anyone can sell ice — automatically!

THE ICE TOWER offers tremendous EXTRA-profit opportunities for gas stations, beer and soft drink distributors, supermarkets, shopping centers, drive-ins, parking lots, resorts, marinas, trailer camps and similar locations.

THE ICE TOWER means EXTRA profits! — With no labor costs, no effort, no additional investment, no cash outlay for ice, no loading! Water and electricity go in — ice cubes come out!

A Few Choice Territories Available to Distributors

U. S. VENDING CORPORATION
207 Centre Street, New York 13, N. Y.
Phone — WAlker 5-3168

Sales Presentations (3)

Differ for Architects, Consultants, Contractors

John O. Roth, marketing manager for Dunham-Bush, West Hartford, Conn., frequently writes sales training lessons for distribution within the company. Some of Roth's material is of such general interest that the NEWS publishes pertinent portions here. Especially of interest is the slanting of sales presentations toward consulting engineers, architects, and contractors. In this third instalment Roth discusses sales to contractors.

●

The contractor is the next individual to be considered where the sales approach is concerned. He differs somewhat from the engineer in that he takes the practical as well as the technical view of the product you are submitting for his consideration.

Where a contractor is concerned, time represents money. Ease of installation, simplicity of handling, these are subjects the contractor must weigh very carefully indeed. The question of making certain he will receive delivery of materials desired on the date promised, is even more important in his eyes.

For the contractor has not only his crew of workers to think about, but the workers employed by his plumbing, electrical, and general building associates as well. The loss of time incurred by such associates can weigh very decisively in determining whether a project may be considered successfully concluded or not.

The contractor is interested in other projects which have been successfully completed, using your products. If you can reinforce your sales presentation by injecting details of such projects, you will advance your cause materially.

He will be interested, too, in any printed instruction material you can provide which his mechanics may use during the installation. The more complete this material is, in the form of manuals or other printed data, the more favorably impressed he will be. And the more simplified form this instructive material takes, the more satisfactory for his purposes.

It is always highly desirable to discuss with the contractor any new design factors or trends in design of which he may be ignorant. He is always keenly interested in keeping abreast of new developments relating to his field. He is constantly seeking new methods which are applicable to projects upon which he is currently engaged. Your assistance in keeping him well informed will be appreciated and may react very materially in your favor when decision is arrived at.

When working with contractors it is always desirable to package your price quotation. This practice will not reveal item pricing and will discourage shopping about by the contractor. In this connection the better you know the contractor you are attempting to sell, the greater the opportunity to bring the transaction to a successful conclusion.

Endeavor in this respect to know the contractors who are busiest, as well as those who work closely with a special manufacturer's representative, or who evince a fondness for a certain manufacturer over a lengthy period of time. If you can ascertain the reason for this fondness you may be enabled to turn this knowledge to your very definite advantage.

(To Be Continued)

Current Literature

Vermiculite Concrete

CHICAGO—Specifications for vermiculite insulating concrete floors on grade, with or without radiant heating, have been issued by Vermiculite Institute, 208 S. LaSalle St., Chicago 4.

The folder covers mixing, placing, and curing of vermiculite concrete, as well as preparation of the base and the application of a sand concrete topping. AIA File No. 4-E-13.

Damper Actuators

EAST HADDAM, Conn. — A new four-page catalog that describes and shows how to install motorized "Zone-A-Trol" damper actuators to provide individual room temperature control or zone control on new or existing residential or commercial air heating or cooling systems is now available from Econo Products Co., Division of Viking Instruments, Inc., here.

Fountain Equipment

CHICAGO — The Bastian-Blessing Co., 4203 W. Peterson Ave., Chicago 46, Ill., has issued a new six-page catalog, illustratting in color its new "Fiesta" line of soda fountains and fast food service units.

The newly-designed stainless steel equipment is available in the stainless steel or with decorative fronts of plastic laminate, of any color or pattern, on all door, drawer, and flat surface fronts or with color accent strips along the contoured top edges. The laminates are bonded to the stainless steel surface.

Air Diffusers

NEW YORK CITY—A new catalog which gives information on the new "Architectural Straight Line" air diffuser has been published by Anemostat Corp. of America, 10 E. 39th St., New York 16, N. Y.

Catalog ASL-70 contains complete application and selection data on this diffuser. Included are performance tables on continuous wall - to - wall, ceiling mounted, or wall mounted ASL diffusers. Also shown are the "six easy installation steps."

11 Ways To Safeguard Business Assets

ST. JOSEPH, Mich.—Eleven ways to safeguard business assets are suggested to its dealers by Whirlpool Corp. They are:

1. Appoint one employe to receive all incoming merchandise. Do not sign for merchandise until checked with freight bill or bill of lading. Have carrier show notation on freight bill for shortage or damage, and sign.

2. Employes should write a sales ticket on merchandise prior to delivery to customer or loading on truck.

3. Keep surplus stockroom locked with keys to be held by store manager and bookkeeper.

4. Store manager should personally, each day, review sales billing tickets as a means of determining if all known sales were billed. It also aids him in having a quick glance at gross profit violations and sales volume.

5. Sales ticket control — all sales books should be kept under lock and key. The bookkeeper should be responsible for handing them out to salesmen who will sign for each book. A log control should be kept as the sales tickets come through daily. All missing tickets should be immediately investigated.

6. Locate safes and cash registers in view of all areas including outside, and illuminate at night.

7. Make daily bank deposits. When cash during day exceeds $500, make a night deposit.

8. Accounts receivable ledger should be placed in fireproof safe during closing hours.

9. Keys to store should be assigned to not more than three people. When key is lost or employe terminates, a locksmith should be called to change the locks.

10. An inventory control stock card system should be maintained which will maintain a balanced stock, speed up inventory turnover, keep inventory in line with sales, prevent losses, locate unrecorded sales, reduce obsolescence, and increase profits.

Monthly physical inventories should be taken and verified against balances on inventory control cards.

11. It is desirable to have a reasonable insurance program on merchandise, equipment, robbery and burglary, casualty, and public liability. Review your needs regularly with a competent insurance representative. Other types of insurance such as fidelity and surety bonds may be needed.

THIS WEATHERSTRIPPING EASILY CONFORMS TO ALL CONTOURS

Foamade FOAM TAPE

It seals better because it fits better, regardless of the contour of the awning, door, window, louver or vent. It stops heat from leaking out or cold from coming in. It seals out dust in window, door and air conditioner installations. It eliminates drafts. It helps solve condensation and noise problems.

CUSHIONS
METAL-TO-METAL CONTACT
Stops rattling, squeaking and other friction noises, yet completely seals out air and dust.

EASY TO INSTALL!
NO GLUE! NO FASTENERS!
Just remove paper backing and press on . . . and it stays on, "alive" and resilient, for a long time to come.

AVAILABLE IN BULK
IN ALL LENGTHS AND WIDTHS

AVAILABLE IN HANDY DISPENSER PACKAGE

WRITE FOR FULL DETAILS

Gentlemen:
Please forward a free sample and information on your FOAMADE FOAM TAPE AC
Name
Firm
Address
City Zone State
Phone
Signature

FOAMADE INDUSTRIES
14851 W. 11 MILE ROAD • OAK PARK 37, MICH.

these Revcor blower wheel achievements can help you improve your product

✳ high output performance
Revcor sets the standard for the industry.

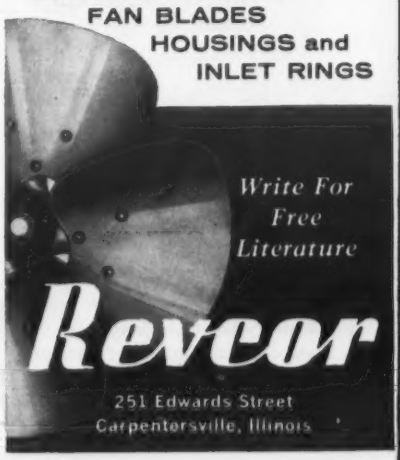
✳ closer tolerances
provide less run out, better balance.

✳ adjustable center discs
on double inlet wheels reduces length of shaft on direct drive wheels.

✳ maximum strength and rigidity
through exclusive Revcor designs.

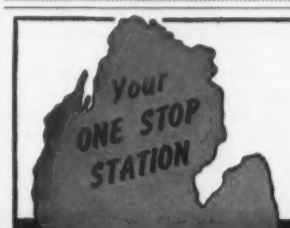
REVCOR BLOWER WHEELS
are used by over 60% of the Room Air Conditioner Manufacturers!

REVCOR MAKES ALL 4
BLOWER WHEELS
FAN BLADES
HOUSINGS and
INLET RINGS



Write For Free Literature

Revcor
251 Edwards Street
Carpentersville, Illinois



FOR ALL YOUR
AIR CONDITIONING—HEATING
and REFRIGERATION needs
WHOLESALE DISTRIBUTORS THROUGHOUT MICHIGAN

GEORGE L. JOHNSTON CO.
SINCE 1937
1420 HOLDEN AVE. DETROIT 8. TR 1-7000
629 MICHIGAN AVE., N.E. GRAND RAPIDS, GL 9-4553

World Trade Corner

LEC REFRIGERATION, LTD., Bognor Regis, Sussex, England, in a newspaper ad for its "International" refrigerator, advised buyers that any such unit sold at less than list price "carries no manufacturer's 5-year guarantee or usual 12 months' free service."

The following day, Lec received congratulations from "a small family business" in Southport "on the stand you are obviously making against the cut-price war that is going on in the 'fridge market."

* * *

IN ECUADOR, a market reportedly exists for air conditioning equipment, refrigerators, and freezing equipment, the U. S. Dept. of Commerce said in noting that a solo trade fair of U. S. goods will be held in Quito July 1-8. Called the North American Commercial Exposition, the event is being planned by the recently-formed Association of Importers and Representatives of American Products in Quito.

* * *

FOSTER REFRIGERATOR OF CANADA, LTD., has leased the former Sylvania plant in Drummondsville, Que. It will use the 12,000-sq ft plant to manufacture welded, all-aluminum commercial refrigerators and freezers for the Canadian and export market.

* * *

AT THE FEDDERS CORP. PLANT in Maspeth, N. Y., executives of firms representing the corporation in Argentina, Canada, and Panama met recently to discuss business with Fedders officials. The visitors were Felipe Kumcher, chief engineer for Boris Garfunkel e Hijos, S. A., Buenos Aires; Oliver Hipwell, manager, Fedders Div., General Steel Wares, Ltd., Toronto; and Aquilino de la Guardia, president, Rodelag, S. A., Panama City.

* * *

TWO "OASIS" WATER COOLERS and a "Hot 'N Cold" were on display at the U. S. Industries Exhibition in Helsinki, Finland, May 26-June 11, The Ebco Mfg. Co., Columbus, Ohio, reported. This was the first U. S. exhibition of its kind in that country, it was noted.

* * *

THE PLESSEY CO., LTD., Ilford, Essex, England, and Rini International announced that a license agreement has been concluded whereby Plessey will manufacture Rini thermal overload protectors and starting relays, with exclusive marketing rights in the U.K. and non-exclusive rights elsewhere, except Italy.

Elettrotecnica Rini S.p.A. of Milan is said to be one of the leading manufacturers of protectors and relays in Europe, and the range includes patented relay-protectors which combine the features of overload protection and relay control in a single unit. Plessey, through the license agreement, will expand its interests in the refrigerator component field.

* * *

THERMO KING CORP. of Minneapolis reported that it played an important role in a "highly successful" traveling food exhibit sponsored by Denmark.

To promote the Danish Food Fair June 2-11 in Aalborg, a truck trailer crammed with Danish food specialties was sent on a tour of 14 American cities. The trailer was equipped with a Thermo King model RL refrigeration unit. Another Danish trailer, which toured Western Europe, also was equipped with a Thermo King unit.

NEWS readers are invited to write to the editor giving their opinions on any subject of interest to the industry.

Custom engineered

TEMPRITE

REMOTE WATER COOLERS

... offer refrigeration men greater flexibility of application and increased profit opportunities...

THIS completely packaged refrigerating unit can be installed overhead . . . behind a wall . . . or under a counter. Widely used in factories, restaurants, motels, schools, etc.; or as a pre-cooler for beverage dispensers; as a capacity booster for ice-cube-making machines, for industrial process cooling, etc.

(Above) Temprite Remote Water Coolers in four models: R-6, R-14, R-17W, R-24W. A complete line of TEMPRITE self-contained water coolers, wall fountains and accessories also available. (Model WF-4000 Wall Fountain illustrated.)

Consult Yellow Pages under "Water Coolers" or write for literature and distributor's name.

Manufactured under rigid quality control by

TEMPRITE PRODUCTS CORPORATION

BOX 72A, BIRMINGHAM, MICHIGAN

Rush me details on Temprite Remote Water Coolers.

Name_____

Company_____

Address_____

City_____ State_____

Dallas-Fort Worth Air Conditioning Sales

Week Ended	RESIDENTIAL No. of Jobs	RESIDENTIAL Total Tonnage	RESIDENTIAL Total Hp	COMMERCIAL No. of Jobs	COMMERCIAL Total Tonnage	COMMERCIAL Total Hp	INDUSTRIAL No. of Jobs	INDUSTRIAL Total Tonnage	INDUSTRIAL Total Hp
April 9, 1961	26	100.00	126.93	5	54.0	68.24	....	....	....
April 16, 1961	64	228.00	285.60	16	385.5	449.16	2	62.0	82.4
April 23, 1961	35	128.5	165.81	11	155.5	208.83	1	20.0	25.0
April 30, 1961	59	193.16	243.88	12	131.5	170.38	1	12.5	14.0
May 7, 1961	98	291.50	448.08	5	54.0	70.25	1	95.0	132.0
May 14. 1961	97	311.5	388.91	3	25.0	32.33	....	....	....
May 21, 1961	44	167.33	233.00	12	121.5	178.66	....	....	....
May 28, 1961	68	190.75	308.00	5	146.0	208.42	....	....	....
June 3, 1961	49	155.00	227.00	21	609.0	830.16	2	49.0	58.0

* * *

Dallas-Fort Worth--

(Continued from Page 1, Col. 1)

Power & Light Co.; and Lone Star Gas Co., Ft. Worth Div. It thus includes sales of all unitary air conditioning equipment reported to these utility companies.

The tabulation published with this story provides a weekly summary of sales by weeks starting with the week ending April 9 and continuing through June 3, with a breakdown by residential, commercial, and industrial.

Frigidaire--

(Continued from Page 1, Col. 1)

eral sales manager who made the announcement, pointed out that Frigidaire has a complete line of major electric appliances while Wiegand offers Chromalox electric comfort heating. He said the sales organizations of the two companies will cooperate in promoting all-electric living and in serving builders of Medallion Homes.

Marsonne Apartments To Have Heat Pumps

MEMPHIS — Construction is virtually complete with more than 75% occupancy in the 48 units of Marsonne Apartments, said to be the Mid-South's first Gold Medallion total-electric living apartment project. General Electric heat pumps are used.

'Hot Spell' Factor In Cooling Sales

(Continued from Page 1, Col. 1)

week in 1960, and that gains, some as much as 50%, were shown in all other categories of air conditioning equipment.

He also reported that a spot check of dealers revealed a familiar story—that nearly all of them were swamped with more business than they could handle satisfactorily.

In New York City and other Eastern metropolitan areas some distributors reported that during the hot spell's peak, they had been unable to reach dealers by telephone, and that their only contact with dealers had been when a dealer entered an order for more units by one means of communication or another.

A number of sources indicated that a general improvement in air conditioning business started in May, following a low period in April. Fedders Corp. recorded its best May in history in terms of number of units they shipped from the factory. Other sources confirmed an improved movement in central residential air conditioners, and in large commercial package conditioners, as reported in the June 12 issue of the NEWS. A couple of Texas distributors reported the best May over a period of several years.

There was also some news of improved general economic conditions to bring some cheer to the industry. Applications for FHA insurance for new home mortgages in May showed the first solid rise in five months. Pace of applications for FHA mortgage insurance is regarded as an indicator of home construction trends, with movements in the rate generally reflected in housing starts two months or so later.

J. A. Gaffigan Heating Purchased Following Death of Owner

SAN MATEO, Calif.—Jack A. Gaffigan, owner of J. A. Gaffigan Heating Co. established here 31 years, died recently. His firm specializes in air conditioning and heating.

Jerry J. Baldwin of Fresno, his step-son, and Michael D. Rich of San Francisco, with Fraser & Johnston Co. 11 years in sales, service, and application, have purchased the company.

They will operate it under the name of Gaffigan Co. at 812 S. Railroad Ave., and have added air conditioning service, refrigeration piping, and commercial air conditioning. The sheet metal department has been discontinued.

Baldwin will continue as manager of The Baldwin Co. in Fresno.

Harry Glover Dies

TUCSON, Ariz. — Harry Glover, 71, co-founder of the Glover & Miller Air Conditioning, Inc., died recently.

BLANKET PROTECTION!

New Thermoseal® insulation for all A. O. Smith fractional and integral hp motors

And you pay no more for this across-the-board protection — a perfectly balanced combination of slot and phase insulation, magnet wire and insulation varnish. Accommodates greater temperature rise, resulting in extended life and dependable operation under the most severe operating conditions. Write today for full facts on Thermoseal.

A.O.Smith CORPORATION

ELECTRIC MOTORS

Tipp City, Ohio

Copyright 1960, A. O. Smith Corp.

From the Files of the News

25 years ago . . .

A portable air conditioning system for airplanes when they're on the ground has been developed by General Refrigeration Sales Co. engineers and is now being used by TWA and American Airlines. . . . United Air Lines is also using a new ventilating system to provide natural air conditioning "aloft" into the cabins of United's three-miles-a-minute transports, and the planes are pre-cooled in airports by special mobile air conditioning units.

Application engineering standards for comfort air conditioning have been adopted by the Air Conditioning Manufacturers Association. Design outside conditions for cooling shall be the average for 10 years of the highest dry and wet bulb temperatures remaining each year after excluding those higher temperatures which have occurred on only 10 days of each year and for durations of less than three hours.

A million dollars worth of air conditioning has been installed in 29 buildings (80% of the total) at the Texas Centennial Exposition, with Carrier, Chrysler Airtemp, General Electric, and Westinghouse installations being prominent. . . . Readers praised the NEWS editorial stand on Grunow "safe refrigerant" advertising which called such advertising "scare advertising" and in bad taste.

10 years ago . . .

An unusual increase in the sale of room air conditioners to homes has been attributed to the desire of TV viewers for greater comfort. Figures that seem to bear this out are recorded increases in air conditioner sales in New York City and Chicago that percentage-wise parallel sales of TV sets. . . . A Pittsburgh contractor has been using fiberglass pre-formed insulation for vegetable and meat coolers because he claims this insulation provides an excellent warm side vapor barrier in conjunction with vapor-porous insulation and finish to allow unretarded passage to the cooling coils of all vapor which escapes the inner barrier.

Increasing popularity of air conditioning will result in greater consumer demand that package units control humidity, William T. Smith, head of the Refrigeration Section of the U.S. Air Force, told the annual ASRE meeting. One way to obtain it in a packaged unit would be to add a reheat coil, he suggested. . . . At the same meeting, D. D. Wile, chief engineer of Recold, Inc., suggested that small air conditioning systems can give satisfactory results during mild, humid weather by a design change which would involve splitting the face area of the coil with separate expansion valves and solenoids for each coil section, and control through a dual room thermostat.

Warning of special care to be taken in the installation of open, self-service refrigerated display cases, John Spence, service manager of Hussmann Refrigeration, Inc., said that "the equipment is not designed to air condition the store," and that "an air current in excess of 10 cfm over the case will scoop the cold air out, causing the temperature to rise and the equipment to work harder."

CLASSIFIED ADVERTISING

RATES for "Positions Wanted" $7.50 per insertion. Limit 50 words. 15¢ per word over 50.

RATES for all other classifications $10.00 per insertion. Limit 50 words. 20¢ per word over 50.

ADVERTISEMENTS set in usual classified style. Box addresses count as five words, other address by actual word count. Please send payment with order.

POSITIONS WANTED

ABSORPTION REFRIGERATION — 3-12 cu. ft. on electric, gas, kerosene. Recognized expert in development and production, managing since 11 years most important production line in Brazil using his own techniques and designs, wishes to change climate. Swiss, 60 years, speaking English, French, German, Portuguese. Available Spring 1962. Personal contact possible August, 1961 in Europe and U.S.A. Serious concerns interested in new types of units, or in starting absorption production, or in permanent or temporary consulting assistance, are invited to write to Box 61, PUBLICITAS EXPORT SECTION, Lausanne (Switzerland).

REFRIGERATION OR related field—20 years' experience on fractional to 125 ton equipment—mostly installation and service, some sales, on commercial store fixtures—the last 2½ years as field engineer for large store fixtures company. For further information contact JIM WILLIAMS, 750 Pennsylvania Avenue, Elmira, New York.

PRODUCT MANAGER—mechanical engineer with 15 years' product administration, ranging from cooling towers to centrifugal compressors. Accustomed to assuming complete product responsibility from feasibility and cost analysis through engineering, manufacture and marketing. BOX A6802, Air Conditioning, Heating & Refrigeration News.

POSITIONS AVAILABLE

MANUFACTURERS' REPRESENTATIVE wanted to handle the new Federal ZeroShelf upright frozen food display merchandiser. ZeroShelf will triple frozen food capacity using present space. Good men needed to establish dealers and distributors regardless of present line the dealers are now carrying. ZeroShelf will complete their line and open a new profitable sales market. Contact FEDERAL REFRIGERATOR MFG. CO., P.O. Box 346, Belleville, Wisconsin with experience, references, etc.

TECHNICAL WRITER — Expansion has created opening for technical writer versed in preparation of equipment and application manuals. Experience in refrigeration products required. Submit resume, salary requirements, in complete confidence to: Max Wynkoop, Supervisor Employment, FRICK COMPANY, Waynesboro, Pennsylvania.

ADDITIONAL SERVICE men needed, commercial air conditioning and refrigeration service and installations, experienced, sober. Good salary. Steady employment. Hospitalization benefits. Give references, present salary, and experience. Our firm in business over 30 years. AARON TORCH & SONS, INC., 452 First Street, Macon Georgia, SHerwood 6-5666.

WELL KNOWN established central American company forming subsidiary to specialized air conditioning and electrical contracting requires experienced mechanical and/or electrical engineer to head it up. Salary plus profit sharing incentive. Latin American, fluent English, Spanish preferred, will consider others. Reply with resume, full details to BOX A6792, Air Conditioning, Heating & Refrigeration News.

APPLICATION ENGINEER—required by Fedders Corporation, location—Buffalo, N. Y.—excellent opportunity for qualified graduate engineer with three years' experience in application engineering on residential air conditioning and heat pumps. Will work directly in Engineering Department preparing manuals, spec sheets and assisting field engineers on problems of installation and application of equipment. All inquiries will be held confidential. BOX A6800, Air Conditioning, Heating & Refrigeration News.

COUNTERMAN EXPERIENCED, for Florida refrigeration wholesaler, must have capability of supervising inside sales and purchasing. Send complete resume, references, salary expected. A good job opportunity with a growing concern for a capable man who wishes to live in Florida. Age not a factor. Party from Iowa who contacted us at Box A6734 please contact us again at BOX A6801, Air Conditioning, Heating & Refrigeration News.

CHIEF ENGINEER—sudden illness opens up challenging opportunity with established manufacturer of air conditioning and warm air heating equipment. The man we are looking for must be marketing-oriented and capable of complete follow-through from initial design to production. Position now open. Send complete resume, including past and present earnings. Our staff knows of this ad. BOX A6803, Air Conditioning, Heating & Refrigeration News.

EQUIPMENT FOR SALE

500 TECUMSEH P-91 "pancake" condensing units, ⅛ h.p. 115V, 60 cycle, manufacturers' factory rebuilts like new for service replacement-compressor, guaranteed, individually boxed. Quantity price $20.00 ea. ship wt. 45 lbs. Sample units $23.95 f.o.b. N.Y. 500 Tecumseh P-91 compressors only, with relay and overload, like new, same as above—individually boxed—guaranteed, quantity price $15.95; sample compressor $18.95. Ship wt. 26 lbs. Check or money order to: COMMERCIAL CONTROLS, 1463 Crotona Place, Bronx 56, New York City. WY 2-5083.

SEALED SYSTEMS wiring simplified—First factual condensation of basic compressor electrical circuitry in five fundamental diagrams on one big wall chart. Covers virtually all sealed systems wiring essentials of single phase air conditioner, refrigerator, freezer or remote commercial units manufactured in United States. $1.69 or 4 for $5.75 postpaid. FRIGID EQUIPMENT CO., Dept. AH&RN, 1340 St. Stephens Road, Mobile, Alabama.

ATTENTION REFRIGERATION Servicemen. Send for catalog listing values in refrigeration and air conditioning parts, relays, capacitors, compressors. Savings up to 50%. WALTER W. STARR, 2833 Lincoln Ave., Chicago 13 Illinois.

CLOSEOUT—NEW complete condensing units, model E-45H, accessible hermetic, ½ h.p. 230 volts, single phase, high starting torque. Complete with all electrical accessories. For expansion valve. Standard temperature. Order now, $79.50 ea. F.o.b. Chicago, Ill. SURPLUS SPECIALTIES SALES CO., 1205 W. Webster Ave., Chicago 14, Illinois. LA 5-9623.

BUSINESS OPPORTUNITIES

EXPANDING APPLIANCE service company located in central New Jersey. Looking for distributorship or authorized service on refrigeration and air conditioning service parts. Warehouse facilities available, all inquiries invited, we may have what you need in this state. SUPERIOR APPLIANCE SERVICE, 75 French Street, New Brunswick, New Jersey.

MISCELLANEOUS

SERVICING AUTO air conditioners? Then you'll save time and earn more money if you are fully informed on all types of systems on the market. They're described fully in "Servicing Automobile Air Conditioners" available in four volumes covering models from 1954 through 1959. Vols. 1, 2, and 4 are $2 each; Vol. 3 is only $1. See your wholesaler or order from BUSINESS NEWS PUBLISHING CO., Dept B, 450 W. Fort, Detroit 26, Mich.

AGENTS WANTED

We are expanding our national sales organization and establishing new sales territories in Iowa, Nebraska, Kansas and Missouri, plus the area from Chicago east and from Tennessee and North Carolina north. We are looking for established sales agents calling on the plumbing, heating and sheet metal trade or on large industrial accounts. Our products include unit heaters, duct furnaces, residential heating equipment, water heaters and industrial air coolers. For agents who will give us good concentrated coverage, we offer better than average compensation. We are prepared to work with you to build a good sales volume through competitive prices and sound sales programs. Please send complete information including the size of your organization, territory covered, lines presently handled and the accounts you sell to Utility Appliance Corporation, 8111 West Beverly Boulevard, Los Angeles 48, California. All inquiries will receive a prompt reply.

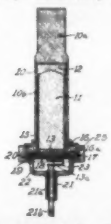
NEWS readers are invited to write to the editor giving their opinions on any subject of interest to the industry.

ROOM AIR CONDITIONER DISTRICT MANAGER

Leading company requires highly experienced man thoroughly familiar with Eastern territory. Travel in 12 states. Salary, expenses, car and other benefits furnished. Send complete resume stating salary requirements in confidence. BOX A6799, Air Conditioning, Heating & Refrigeration News.

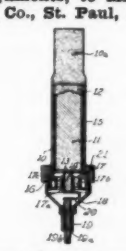
PATENTS *Week of Feb. 21 (Concluded)*

2,972,653. THERMOELECTRIC GENERATOR. Robert W. Fritts, Elm Grove, Wis., and Sebastian Karrer, Port Republic, Md., assignors, by mesne assignments, to Minnesota Mining & Mfg. Co., St. Paul, Minn.



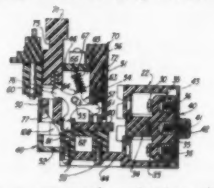
1. An incapsulated thermoelectric generator comprising a pair of spaced apart elongated thermocouple element means, at least one of which is a semi-metallic alloy, connected at portions thereof to provide a hot junction, means for hermetically sealing said semi-metallic alloy thermocouple element means from ambient atmosphere, and means including said hermetic sealing means adjacent one end of said semi-metallic alloy thermocouple element means accommodating differential linear thermal expansion and contraction of said pair of thermocouple element means relative to each other.

2,972,654. THERMOELECTRIC GENERATOR. Robert W. Fritts, Elm Grove, Wis., and Sebastian Karrer, Port Republic, Md., assignors, by mesne assignments, to Minnesota Mining & Mfg. Co., St. Paul, Minn.



1. A thermoelectric generator comprising, a pair of elongated spaced apart thermocouple element means, at least one of which is a semi-metallic alloy, connected at portions thereof to provide a hot junction, said thermocouple element means having substantially matching linear thermal expansion upon heating of said hot junction whereby said thermocouple element means maintain substantially the same lengths relative to each other, and means associated with said thermocouple element means substantially matching the linear thermal expansion of the latter for hermetically sealing said semi-metallic thermocouple element means from ambient atmosphere.

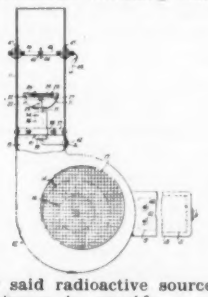
2,972,664. MANUAL MOTOR STARTER WITH OVERLOAD PROTECTION. William C. Furnas, Batavia, and Irving W. Krieger, St. Charles, Ill., assignors to Furnas Electric Co., Batavia, Ill.



1. In a manual actuator for controlling the actuation of normally closed switch contacts, in combination, a toggle member journalled for oscillating movement, a resilient coil spring in contact with the toggle member for tensioning the member into off-center positions on respective sides of a central plane passing through the journalling axis, a stop push button slide located on one side of the member and operatively connected to the toggle member, a start push button slide located on the other side of the member and also operatively connected thereto. . . .

2,972,680. ION GENERATOR AND METHOD. William Wesley Hicks, San Francisco, and John Collier Beckett, Kentfield, Calif., assignors to Ionaire, Inc.

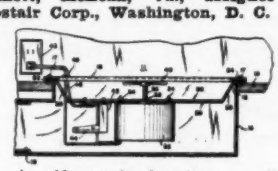
1. In an ion generator adapted to be placed in an airstream, a radioactive source, means for mounting said radioactive source in said airstream, said last named means including means for



shielding said radioactive source from said airstream to provide a zone of quiet air downstream from the radioactive source, means including said radioactive source serving as an electrode, an additional electrode mounted in said airstream, means for applying a charge of one sign to said radioactive source and for applying a charge of the opposite sign to said additional electrode whereby ions of the sign opposite the charge on the first named electrode, are collected by the first named electrode and ions of the same sign as the charge of the first named electrode are repulsed therefrom and follow the electrostatic flux lines towards the additional electrode and pass into the airstream which sweeps them past the additional electrode and into the surrounding air.

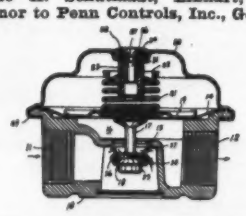
Week of Feb. 28

2,972,941. AIR DISTRIBUTION SYSTEMS AND APPARATUS. Michael W. Bennett, McLean, Va., assignor to Boostair Corp., Washington, D. C.



1. A self-contained unitary auxiliary air distribution unit for use with a central forced air air-conditioning system having air ducts terminating in stack heads having outlets substantially flush with a wall surface of a room, said outlets being provided with a normal register detachably held in place by retaining means comprising a substantially flat register grill of the same frontal area and shape as said normal register and having a solid peripheral rim and a central perforate grill portion, said register grill being help in place at said outlet substantially flush with said wall surface by said retaining means, a mounting strap rigidly secured to said register at the rear side thereof. . . .

2,973,007. PRESSURE REGULATOR. Wayne H. Schutmaat, Elkhart, Ind., assignor to Penn Controls, Inc., Goshen.



1. In a fluid pressure regulator valve, flow control means comprising: means defining first and second chambers; means defining a flow passage between said chambers and having an annular inlet portion defining a frustoconical valve seat confronting the first chamber; a valve stem extending longitudinally threugh said flow passage; a pressure responsive flexible diaphragm across said second chamber having a randomly disposable mid-portion; means securing one end of said valve stem to said diaphragm mid-portion for reciprocation of the valve stem generally coaxially to said flow passage and freely to permit a slight random displacement of the axis of the stem relative to the axis of the flow passage. . . .

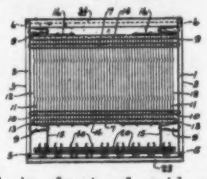
2,973,016. MEANS FOR SECURING INSULATING MATERIAL ABOUT A DUCT. Ernest L. Holtsford, c/o Badham Insulation Co., 1909 1st Ave. S., Birmingham, Ala.

1. In combination, a rectangular duct, layers of insulating material covering the four sides of the duct and comprising separate sheets arranged in end-to-end contact relation, the joint formed between the sheets extending about the periphery of the duct and

lying in a common plane, a clip member on each of the four corners of the duct at the joint formed by the ends of adjacent insulating sheets, each of the clip members having a pair of connected legs arranged in right angular relation with one leg disposed against one side of the duct and the other leg disposed against an adjacent side of the duct. . . .

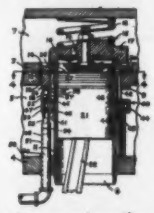
2,973,055. ELECTRONIC AIR CLEANER. Paul W. Aitkenhead, Ross Township, Allegheny County, Pa., assignor to Electro-Air Cleaner Co., Inc., McKees Rocks, Pa.

1. An electronic air cleaner comprising a tubular housing surrounding a bank of parallel collector plates and an ionizer, alternate of said collector plates mounted for connection to positive polarity and the balance mounted for connection to ground, said ionizer



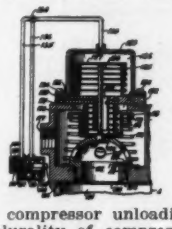
mounted in front of said collector plates and including an alternate series of parallel ionizing wires and electrodes mounted for connection to positive and ground, each electrode having a leading edge up air stream of an associated ionizing wire, a side facing said wire and a trailing edge. . . .

2,973,132. UNLOADING MEANS FOR RECIPROCATING COMPRESSOR. Sylvan R. Hirsch, West Orange, N. J., assignor to Worthington Corp., Harrison, N. J.



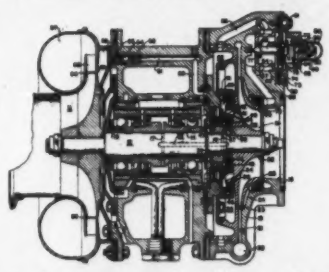
1. Means for varying the capacity of a reciprocating compressor including a casing, a cylinder in said casing, a piston slidably disposed in said cylinder, a suction inlet and discharge outlet for said cylinder and having valve means to control fluid flow into and out of said cylinder, said means for varying the capacity of said compressor comprising an annular ring movably mounted about said cylinder and concentric therewith and having a fluid means connected to one end of said chamber and at the other end adapted receiving chamber therein, actuating to engage said valve for said suction inlet. . . .

2,973,133. COMPRESSOR UNLOADER. Alwin B. Newton, Wichita, Kan. (850 Clubhouse Rd., York, Pa.)



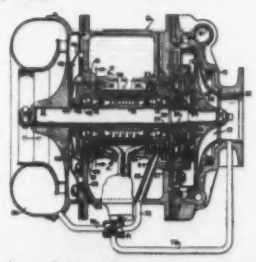
1. In a compressor unloading apparatus, a plurality of compressor units each having a compression chamber therein, a valve casing having a plurality of suction chambers each communicating with one of said compression chambers through a flow port, a movable valve member adjacent each of said flow ports, a plurality of valve seats each being shiftable between two positions and each being cooperable with one of said valve members for closing said port only when said seat is in one of said two positions, pressure-responsive means cooperating with each of said seats to position the same for independently loading and unloading each of said compressors, a motor for driving said compressor units. . . .

2,973,135. SEAL FOR REFRIGERANT COMPRESSOR. Harold A. Greenwald, Los Angeles, Calif., assignor to The Garrett Corp., Los Angeles, Calif.



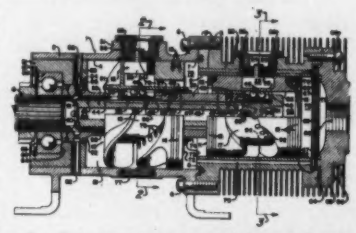
1. A compressor comprising: a drive shaft; a centrifugal impeller having an inlet and discharge, said impeller being mounted on said shaft; bearing means for rotatably supporting said shaft; driving means for driving said impeller; vent means for venting the side of said impeller opposite said inlet to said inlet; flow control means mounted in said vent means, and means for actuating said flow control means in response to the atmospheric pressure surrounding said compressor to maintain the pressure on said side of said impeller above atmospheric pressure.

2,973,136. COMPRESSOR. Harold A. Greenwald, Los Angeles, Calif., assignor to The Garrett Corp., Los Angeles, Calif.



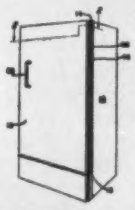
1. A refrigeration compressor unit adapted to handle a vapor cycle refrigerant having a normal suction pressure above normal sea level atmospheric pressure, comprising: a compressor unit and driving unit mounted in a common casing; the rotating elements of said compressor and driving units being mounted on a common shaft; bearing means mounted in said common casing for rotatably supporting said common shaft; first shaft sealing means mounted in said common casing between unit; second shaft sealing means mounted in said casing between said said bearing means and said driving bearing means and said compressor unit; a passageway formed in said casing adjacent said bearing means; inlet means connected to one end of said passageway adjacent said compressor for conducting fluid under pressure to said passageway. . . .

2,973,137. CAM PISTON TWO-STAGE COMPRESSOR. Raymond W. Jensen, Phoenix, Ariz., assignor to The Garrett Corp., Los Angeles, Calif.



1. A compressor comprising: a housing; first and second piston means disposed for combined rotation and reciprocation in said housing, said pistons and housing serving to define a first chamber between said pistons, a second chamber between said second piston and said housing and a third chamber between said first piston and said housing; shaft means provided with a longitudinally extending bore, said shaft being supported for rotation in said housing and extending longitudinally thereof for driving connection with said pistons. . . .

2,973,235. REFRIGERATOR CABINET. Orson V. Saunders, Dayton, Ohio, assignor to General Motors Corp., Detroit, Mich.



1. In a refrigerator, a cabinet having insulated walls defining a food storage compartment therein provided with a front access opening, a door for closing the compartment opening, hinge means at the top and bottom of said door mounting same on said cabinet for swinging movement relative thereto, said hinge means having a single pivotal axis spaced a substantial distance in front of the cabinet front wall about which said door swings, a decorative moulding along opposite vertical sides of said door, said mouldings being provided with a surface disposed flush with the exterior surface of side walls of said cabinet forming forwardly directed continuations thereof concealing the juncture between the cabinet and said door as the refrigerator is viewed from one of its sides. . . .

(To Be Continued)

Comfort-Aire

AIR CONDITIONING

Self Contained Air Conditioners

Four full capacity models of 2, 3, 4 and 5 h.p. for residential and commercial applications. Smart in appearance and design proven, they allow complete flexibility of installation. Large coil surfaces, bonderized cabinets, Tecumseh compressor, capillary system and other quality features provide a Comfort-Aire owner many years of quiet, dependable operation.

Remote Air Conditioners

Available in the same size range as self-contained models, the split systems offer a large choice of evaporator-blower units and coil sections. The compact, efficient matched compressor units feature oversized condensers, low velocity horizontal air flow and Tecumseh compressors. Comfort-Aire matched systems are easy to install, quiet in operation and weather proofed to provide years of trouble free performance.

Also Available in Heat Pump Models

Dehumidifiers - Portable Room Air Conditioners - Through-the-Wall Air Conditioners - Furnaces - Air Cooled Remote and Self Contained Air Conditioners - Air Cooled Remote and Self Contained Heat Pumps

HEAT CONTROLLER, INC.

1900 Wellworth Ave. Jackson, Mich.

Service Auto Air Conditioners QUICKLY . . . PROFITABLY

This new manual shows you immediately the model year of unit; names, numbers, and list prices of parts; time allowance and labor rate for several hundred different models produced 1957 through 1960.

You can make an accurate estimate of costs in a hurry, order the exact parts needed if not in stock, and get the repair job done quickly without wasting valuable time.

This book also shows which compressors and clutches are interchangeable on many makes and models. This lets you service a much greater variety of makes with little increase in inventory.

Auto Manufacturers

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Ford
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Rambler
Rambler American
Lark
Studebaker

Independents

A.R.A.
Allstate
Clardy
Climatic Aire
Eaton
Equip-Aire
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Mark IV
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PARTS AND LABOR RATE BOOK

by R. V. Anderson
(Inventor of Mark IV)

252 pages, 8½ by 11
Illustrated, $30

Exploded views of evaporator assemblies produced by Independents show each part with number. Also listed are all makes and models of cars for which Independents made units during 1957-'60; major components and part numbers, refrigerant charges. Compressor and clutch assemblies are cross-referenced. Similar data is listed for Auto Manufacturers.

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Please rush me ..... copies of Parts and Labor Rate Book for auto air conditioners at $30 each.

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AIR CONDITIONING AND REFRIGERATION EQUIPMENT AT LIQUIDATION PRICES!

Multi-Million Dollar Textile and Chemical Plant
Formerly Owned By INDUSTRIAL RAYON CO., Cleveland, Ohio

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Majority of Equipment Installed NEW since 1950
FIRST COME! FIRST SERVED!

1—CARRIER Centrifugal Refrigeration Machine 800 ton, model 17M63-9-5/3-3-9-/2, using Carrene #2, F-11 to cool 1900 CPM of water from 50°F. to 40°F. when supplied with not less than 2370 Gal. of condensing water @ 85°F. with cooler and condenser, Murray steam turbine, recording controller, precisor. NEW 1952.
1—CARRIER Refrigeration Machine, freon centrifugal compressor, size 17M, 43-5½-5, Cap. 285 tons with 300 HP, M/D, 3/60/440 motor. NEW 1950.
1—CARRIER Refrigeration Machine, freon centrifugal compressor, size 17M51-7-6½, Cap. 415 ton. Rotation: clockwise with 400 HP, M/D, 3/60/440 motor. NEW 1960.
1—CARRIER Refrigeration Machine, freon centrifugal compressor, size 17M 44A-6½-6. Rotation: clockwise with 350 HP, M/D, 3/60/440 motor. NEW 1950.

1—CARRIER Refrigeration Machine—#17MB44-7-6, multi-stage, uses Carrene #2 (f-11), 360 tons, cooler multi-pass, working pressure 200#, 25' Drop @ 855-GPM @ 50°F. entering and 40°F. leaving, condenser multi-pass, working pressure 200#, 15' Drop @ 1080-GPM @ 85°F. entering temperature (model 17M44) with 400 HP, M/D, 3/60/440 AC motor and gear reducer. NEW 1952.

1—YORK Refrigeration Machine, size 10" x10" cylinder compressor, compressor speed 360 rpm, model #10102 E, with 150 HP, 3/60/440 AC motor, ammonia receiver, ammonia condenser, oil separator tank, starting switch.
1—CARRIER Freon Compressor, #5H60-899, 2 cylinders, Service-Air conditioner #410202, with 40 HP, M/D, 3/60/220-440 AC motor. NEW 1952.
1—CARRIER Freon Compressor, #5H60-899, Service-Air conditioner #410202.
1—CARRIER Model #5H80-A219 Compressor, with crankcase heater, crankcase heater relay, with 50 HP 220-440 V. 3/60 motor.
1—McRay Single Stage Air Compressor. NEW 1954. 1—Niagara Air Package Air Conditioner. NEW 1954.
1—CARRIER Air Washer, Type 29-C, 97,500 CFM, 163 sq. ft. free area, 600 FPM air velocity, 2 spray banks, 48 flooding nozzles, 414-3/16" orifice nozzles, 815 GPM spray water circulation rate with water heater, pumps and motors.
1—CARRIER Supply Fan, American blower, M/D. 1—CARRIER Exhaust Fan, American blower, M/D.
1—CARRIER Air Conditioning Unit, 98,000 CFM, 162 sq. ft. free area, 605 FPM air velocity, 450 spray nozzles, ½ HH-29 with spray pump, water heater, motors.
2—CARRIER Supply Fan, American blower, M/D. 1—CARRIER, Buffalo Forge fan #5½" "LL," M/D.
1—REISTER & THESMACHER Air Conditioning Unit, Westinghouse model AV-1616, style #6245.1 with motor.
1—CARRIER Air Conditioning Unit, with spray pump, condenser, water cooler, compressors and motors.
1—AIR & REFRIGERATION CORP. Blower type W, design #1, M/D.

1—AIR & REFRIGERATION CORP., Air Conditioning Unit, class 1-10-12, capillary type project 443, actual cap. 390,000 CFM, 2.77" static pressure operating speed 3.32 RPM, with pump and motor.

FANS AND BLOWERS

1—AIR & REFRIGERATION Blower, size 4¾, type W design #1, arr. F., Clarage fan with 30 HP motor.
1—SILENTVANE Fan, Sturtevant, LU, Size #100, design 10, SWSI arrangement 3, CCW, DB discharge with 25 HP G.E. motor.

1—SILENTVANE Fan, design 10, Sturtevant size #85, arrangement 2, C.C.W. rotation, ball bearing, up-blast, B.H.P., 6.8, 14,900 CFM, @ 1.75" SP, 895 R.P.M., 49.5" centers, wheel diam. 33", with 7½ HP Westinghouse motor.

3—72" Clarage Fan Blower with 75 HP, M/D, Westinghouse motor and controls.
6—Aluminum Circulating Fan on top Hoffman Cooling Towers, 50 H.P. M.D.
1—ROOTS-CONNERSVILLE Exhaust Blower, type RCS, size 12" x 24", 25 HP G.E. motor.
1—ROOTS-CONNERSVILLE size 12" x 30", type RCR rotary positive blower, standard arrangement, with 20 HP Westinghouse motor.
1—ROOTS-CONNERSVILLE, size 8" x 20", type RCA blower with extended base plate and coupling, R.H. drive, top inlet and bottom discharge.
3—BUFFALO SILEX Fan #18, pressure design 2", actual capacity: 175,000 CFM, operating speed 260 RPM, bottom horiz. discharge, CCW rotation, rating 223,000 CFM @ 3.02" S.P., 324 RPM, 195 BHP, @ 70°F. 200 HP, M/D.
3—GENERAL ELECTRIC Motor, sliding base, @ $254.00 each, Code F. design 3, service for HD exhaust fan. 200 HP, M/D, 3/60/440 AC.
3—MANUAL MOTOR CONTROLLER, autotransformer type, type CR-1034, for 200 HP, 440 V. 3 phase, 60 cycle induction motor.
1—Blower, type W., size 4¾, design #1, Arr. F. Clarage fan with 30 HP motor.
OTHER EQUIP. IN PLANT. New stores: $250,000.00 Acquisition cost, consisting of Elec. Traveling Cranes, Elec. and Gas Fork Lift Trucks (up to 6,000 lb. cap), Mach. parts, Fittings, Valves, Ball Bearings, Elec. Supplies, Elec. Hoists, Asst. Elec. Motors, Industrial Vacuum Cleaners, Complete Cafeteria (Equip. and Furniture), Hardware, etc.

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Cooling Off

Theater Goers, Pigs, Hens, and Parishioners

We didn't do it! For once, New York City had a power blackout and air conditioning didn't take the blame for it. Consolidated Edison manfully admitted that the trouble was due to a mechanical failure in a sub-station. This automatically triggered protective shutdown of other electrical equipment in the mid-Manhattan area. Power outage happened on the hottest afternoon of the year, too. Temperature hit 96°F. Gave perspiring New Yorkers five hours in which to ponder the wonderful benefits of air conditioning.

The Plymouth theater accommodated requests for refunds and ticket exchanges because of lack of air conditioning.

* * *

If pork chops get bigger, thank air conditioning. University of Florida has been experimenting with air conditioned piggeries. Finding: At 60° sows produced average litters of 13.6 piglets as compared with 10.4 at near 90° temperature. Piglets were heavier, too. Greatest and fastest weight gains are made by hogs kept at temperatures under 75° and 40% relative humidity.

* * *

Air conditioned hens lay 30% more eggs, Lewis A. Hayden of Denver has found in four years of research. Hayden will head up a new electronic egg factory that will house 100,000 white leghorn hens in air conditioned comfort. Hens in individual cages in tiers will revolve around a tower, reaching food and water supplies at scientific intervals, we're told.

* * *

Air conditioning is habit forming, the St. Louis Public Service Co. finds. The company operates 355 air conditioned buses on the streets of St. Louis. The air conditioned buses not only have added 6 to 13% more customers on various routes, but has kept two thirds of these new passengers riding the buses even during the winter. Additional revenue not only covered increased operating cost and amortization of the Thermo King cooling units, but yielded 15 to 20% return on investments.

* * *

Amen! say the parishioners of St. Augustine, Fla., diocese. The Diocese has adopted a policy that no new churches will be constructed without air conditioning. Four churches have recently been built, all with air conditioning. One, the Church of the Transfiguration at St. Petersburg, is equipped with 45 tons of Typhoon heat pumps.

* * *

William J. Levitt, prolific builder of the famous Levittowns on the east coast, is planning a development of 1,300 air conditioned homes on a 500-acre tract in New Jersey to be called Strathmore-at-Matawan. Homes are to be in the $16,000 to $25,000 price bracket.

* * *

Kansas may have been a hot spot 100 years ago, but the reconstruction of those days won't be. The Opera House in Frontier Village, just west of Wichita, has just been cooled by a 20-ton Westinghouse unit. The east and west exhibition halls of the Kansas Centennial Exposition are also cooled by three 30-ton and one 20-ton Westinghouse packaged units. Hill Airconditioning, Inc. of Wichita was the contractor.

* * *

Looking for a new spot to stage a convention in 1964? Tampa, Fla., is whistling in your direction waving plans for a $2.5 million, completely air conditioned convention center with a capacity for 8,000 persons. As of now, the city has just purchased a 17½-acre site "on the picturesque banks of the Hillsborough River" and allocated money for construction by late 1963 or early 1964.

'Freon' Div. Develops Simple Acid Test for Servicemen In Field

WILMINGTON, Del. — A simple acid test which servicemen can conduct in the field has been developed by "Freon" Products Div., du Pont, the NEWS learned on a visit here.

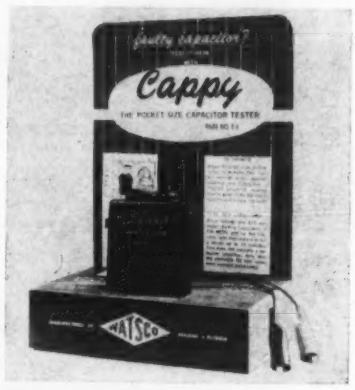
"The new test uses a specially treated indicating paper," explained Dr. B. J. Eiseman, Jr., who demonstrated the test for the NEWS. "No wet chemicals or titration-type procedures are required. Further, the test differentiates between the really corrosive mineral acids and the harmless organic acids. Titration methods measure total acid content (mineral and organic)."

The treated paper is torn and placed in the oil being tested or in the Refrigerant-11 flush from a recently cleaned system. The torn edge will turn blue; how much of the edge and paper turns blue and the intensity of the color are related to several degrees of acid contamination.

The du Pont acid-testing procedure requires no expensive testing kit, Eiseman stated, and the test papers are being made available through wholesalers.

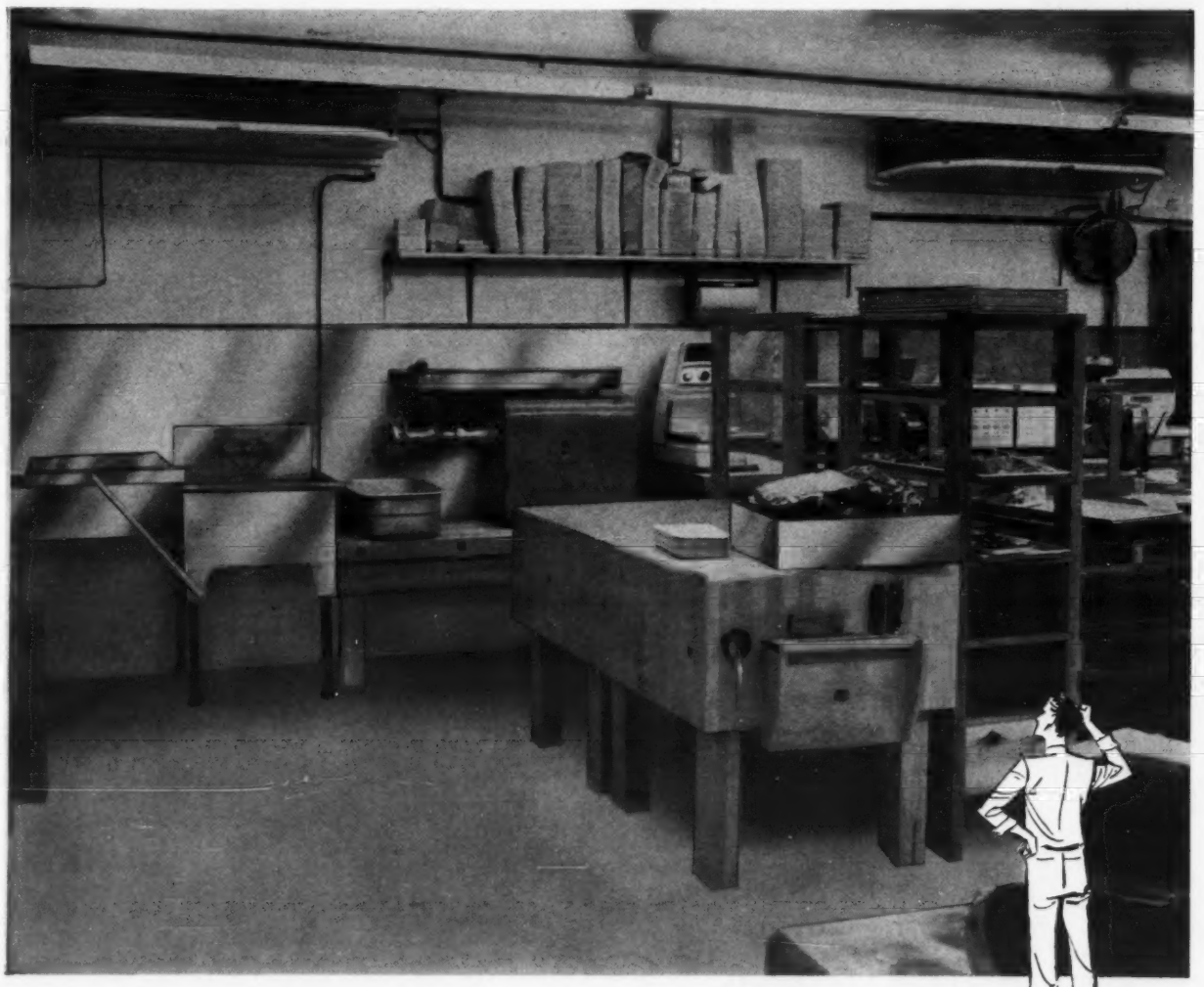
New Orleans Firm Named Burgess-Manning Outlet

LIBERTYVILLE, Ill. — King & Co., New Orleans, has been appointed exclusive distributor for the Burgess-Manning radiant heating, cooling, and acoustic ceiling for Louisiana and for all counties in Mississippi south of and including Hinds, Lauderdale, Newton, Rankin, Scott, and Warren, the manufacturer announced recently.

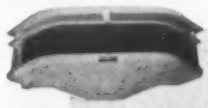


Cappy Counter Display

COLORFUL new counter display featuring Cappy, the pocket size capacitor tester is being offered to its wholesalers by Watsco, Inc. of Hialeah, Fla. This display, which the company refers to as its "silent salesman" permits the serviceman to perform a free capacitor test at the wholesaler's counter. Cappy is used to test faulty capacitors, line voltage, continuity, fuses, motor windings, and appliances.



WHERE'S THE UNIT COOLER?



DUNHAM-BUSH 'TJ'— The perfect unit for installation at the corner juncture of walls and ceiling—occupying minimum valuable storage space. Aluminum casing finished in baked white enamel. Capacities range from 6,750 to 36,000 BTU/HR at 15° T.D.

DUNHAM-BUSH 'UC'— Deep plenum chamber, full drain pan and rugged channel iron hangers are but a few of the construction features that have made these units first choice of refrigeration engineers everywhere. Split circuiting, providing for proper loading per circuit . . . and accurate, conservative ratings are a few of the engineering features that guarantee maximum performance. Capacities 5,250 to 48,000 BTU/HR at 15° T.D.

Like most Dunham-Bush unit coolers the 'WJ' shown in the cutting room above was specifically engineered to be unobtrusive . . . occupy minimum valuable storage space. Capacities of this line range from 5,250 to 36,000 BTU/HR at 15° T.D.

The 'WJ' Wall Jet unit coolers as other units in the expansive Dunham-Bush line feature aluminum casings finished in baked white enamel, stainless steel hardware, generous size drain pans, plate type serrated fins, tubing sized according to load, and accurate conservative ratings.

Dunham-Bush, producer of the industry's most complete line, offers units to meet all your needs: low or medium temperature unit coolers, product coolers, plasti-coolers, gravity coils, glycol defrost units, water savers, semi-hermetic or open type compressors and condensing unit.

DUNHAM-BUSH

DUNHAM-BUSH, INC.

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